A stylized butterfly logo with orange and purple wings, positioned to the left of the main title.

Journal of Optometric Education

Fall-Winter '76

JOURNAL OF OPTOMETRIC EDUCATION

Official Publication of the Association of Schools & Colleges of Optometry

TABLE OF CONTENTS

Volume 2, Number 3 Fall/Winter 1976

Association Activities and Board Briefs	3
A synopsis of actions and recommendations of the most recent Annual Meeting and Board of Directors Meetings.	
A Survey on Intramural and Extramural Practice in Selected Professional Schools by Drs. G. Woo and W.M. Lyle	5
Results of a survey of optometric, medical, and dental schools on their policy of faculty private practice.	
Guidelines and Standards for Visual Science Libraries Serving Optometric Institutions by Elizabeth Egan, Editor	8
A shorter version of this detailed report was printed in the Journal (Volume 2, Number 2). The guidelines are reprinted here in their entirety.	
Pharmacology Curriculum Guidelines for Continuing Education Courses by the Council on Academic Affairs of the Association of Schools and Colleges of Optometry	16
These guidelines were enacted to provide advice to providers of continuing education in pharmacology on the extent and scope of an optimum course outline in this subject matter.	
Council on Optometric Education: Report to the AOA House of Delegates by John D. Costabile	18
The Journal reprints the report of Council Chairman, Dr. John D. Costabile from his 1976 address to the AOA House of Delegates.	
Establishment of the Optometry Program in Indiana by Francis Moshos	22
A profile of Indiana University's School of Optometry on the occasion of the twenty-fifth anniversary of enabling legislation.	
The New Health Professions Law and Optometric Education	27
The Journal is pleased to present an interview with Mr. David Lewis, Director of the National Health Division of the American Optometric Association on P.L. 94-484, the new Health Professions Educational Assistance Act of 1976.	

Front Cover design by Valerie McGhee

The **JOURNAL OF OPTOMETRIC EDUCATION** is published by the Association of Schools and Colleges of Optometry (ASCO). **Managing Editor:** Louis A. Ebersold. **Art Director:** Roger Kranz. **Editorial Assistant:** Cassie Jablonski. Business and editorial offices are located at 1730 M Street, N.W., Suite 210, Washington, D.C. 20036. **Subscriptions:** JOE is published quarterly and distributed at no charge to dues-paying members of ASCO. Individual subscriptions are available at \$10.00 per year. \$15.00 per year to foreign subscribers. Postage paid for a non-profit, tax-exempt organization at Washington, D.C. Copyright© 1977 by The Association of Schools and Colleges of Optometry. Advertising rates are available upon request.

Association Activities and Board Briefs

The Board of Directors of the Association, over the last two and a half years, has met on a quarterly basis to consider matters of importance to optometric education and the profession. Although the minutes of these meetings are voluminous, an effort has been made to distill the highlights of these meetings for presentation as a regular feature of **JOE**.

The Board of Directors receives information from its Councils and Officers and outside agencies, considers the impact on the education system, and subsequently directs its own operating agencies to either take action or recommend action back to the outside agencies. The following represents actions and recommendations of the Board emanating from the Annual Meeting and Board Meeting in Las Vegas, June, 1976; Board of Directors meetings in Bloomington, Indiana, October, 1976, and Washington, D.C. in November, 1976.

Annual Meeting, Las Vegas, June, 1976

1. An Ad Hoc Committee on Priorities and Purposes was established to review the present status of activities of the Association incident to the creation of a budget for 1976-77. An interim budget for the first quarter of the Association's fiscal year was adopted subject to revision in line with the report of the Committee at a future Board meeting.

2. Joint meetings were held with the Council on Optometric Education, the International Association of Boards of Examiners in Optometry, and the National Board of Examiners in Optometry. Year-end reports were given by the Chairmen of the three Association Councils. Dr. Michael Heiberger, State University of New York, reported on activities of the Council on Student Affairs. Dr. Jerald Strickland, Pennsylvania College of Optometry, reported for the Council

on Institutional Affairs, and Dr. J. Boyd Eskridge reported for the Council on Academic Affairs.

3. The Board passed resolutions commending the officers and Executive Director of the Association for their devotion and creative activity during the year. The Board also expressed its appreciation to the officers and staff of several outside associations and agencies. A commendation for his ten years of service to the Council on Optometric Education was given to Dr. Alfred Rosenbloom, President of the Illinois College of Optometry. Condolences were expressed by resolution to the Optometric Extension Program Foundation for the loss of Drs. A.M. Skeffington and E.B. Alexander.

4. The Nominating Committee reported that the current officers would begin to serve the second year of a two-year term in office according to the ASCO Constitution and Bylaws. The name of Dr. Frank Brazelton was placed in nomination for the ASCO position on the National Board of Examiners in Optometry. Dr. Brazelton was unanimously endorsed.

5. The Association recommended the dates of April 11, 12, and 13, 1977 as the dates for the coming regular session of the National Board of Examiners in Optometry. The Association also recommended that the National Board of Examiners in Optometry delay the setting of examination dates beyond 1977 to await the results of a calendar survey being conducted by the Council on Student Affairs. Further, the National Board was asked not to release the specific rank of individual schools on the summary statistical report, which should simply list the overall mean and standard deviation of each school each year. A recommendation to change the title of Section 8 (SLEPPA) to "Community Aspects of Optometry" was also passed.

6. The Association recommended that the International Association of

Boards of Examiners in Optometry publish and distribute an informational brochure containing items of interest such as state board examination dates, location, times, and areas of emphasis.

7. The Association tabled a motion concerning the use of drugs by optometrists for diagnostic and therapeutic purposes.

Board of Directors Meeting, Las Vegas, June, 1976

1. The Board of Directors amended the Constitution and Bylaws, adding as requirement for active institutional membership that the applicant schools have received an accredited status from a national professional accreditation agency recognized by the U.S. Office of Education. The Board also adopted a motion to subject the ASCO Constitution and Bylaws to a broad review.

2. The Board tabled a motion to accept the application of Ferris State College, College of Optometry, for active institutional membership.

3. The Board agreed to suspend Chapter 3, Section 2, of the Constitution and Bylaws of the Association regarding penalty for non-payment of dues in order to permit the Ad Hoc Committee on Purposes and Priorities to report.

4. The Board directed the Association to employ an outside, independent audit firm to review the records of the Association for the fiscal year 1975-76.

5. The Board encouraged the University of Alabama at Birmingham to continue experimentation with continuing education in optometry by mail (CEOM).

6. By way of announcements, President Wallis indicated his choices for membership on the Ad Hoc Committee on Purposes and Priorities to include Drs. Carter, Baldwin, Hebbard, Rosenbloom, and Bleything. Also, action would be delayed on

the Council on Academic Affairs suggested residency guidelines until the October Board of Directors meeting in Bloomington, Indiana.

7. Consideration of optometry's role as a Primary Health Care Provider was assigned to the Council on Institutional Affairs.

Board of Directors Meeting, Bloomington, Indiana, October, 1976

1. Commendations were given to the President and the Executive Director for their efforts in organizing and preparing the section on optometry published in the AAHC pamphlet "A Synopsis of the Health Professions Educations."

2. The Board ratified the office move from Suite 411 to Suite 210 in the 1730 M Street Building. An analysis was requested of the cost of sharing space with the AOF prior to July 1, 1976, compared with the current cost of operation in the suite next to the AOA Washington Office.

3. The Board requested the President respond to the HEW proposal on Health Manpower Credentialing.

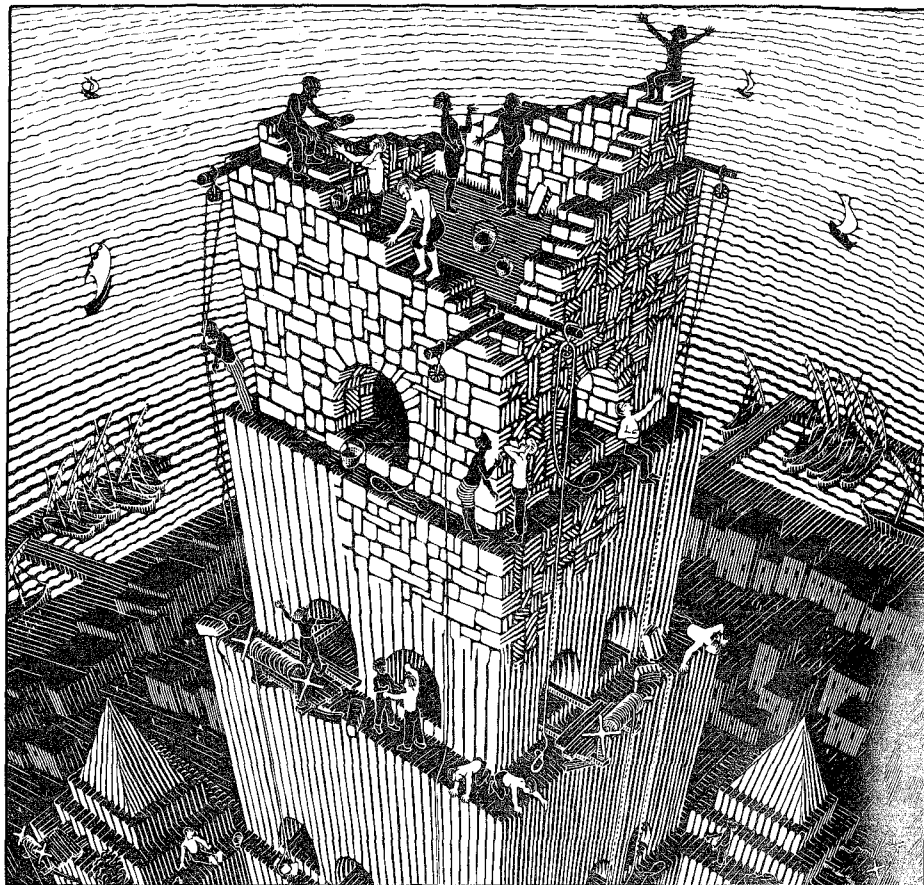
4. The Executive Director was asked to review previous Board minutes for action on attaining membership in the National Health Council.

5. The Board directed the ASCO President to write to the President of the Missouri Optometric Association concerning the new school program.

6. The Board requested the Chairman of the Council on Institutional Affairs to prepare a letter endorsing the position of the American Optometric Association on Primary Health Care as presented to the National Academy of Sciences Institute of Medicine Committee.

7. The Board adopted a list of seven recommended areas of concentration developed by the Committee on Purposes and Priorities. The list as presented, not necessarily in an order of priority, included the following areas: 1) national planning in relation to optometric education; 2) resource to federal agencies; 3) identification of external funding sources; 4) internal information exchange; 5) external visibility for optometry education; 6) an educational repository for optometric education; and 7) approved special projects.

8. The Board accepted the supplemental report of the Council on Academic Affairs entitled "Proposed



Residency Guidelines" for the purpose of assisting those schools who desire to develop such residencies.

9. The Board returned the report received in June to the Committee on Industry Relations for rewriting of Section C, with the request to report back to the Board in December.

10. Resolutions were made and voted on commending Indiana University on the occasion of its 25th Anniversary and to Dr. and Mrs. Irvin Borish for receiving the Board of Directors in their home during the Indiana Board meeting.

Special Board of Directors Meeting, Washington, DC, November, 1976

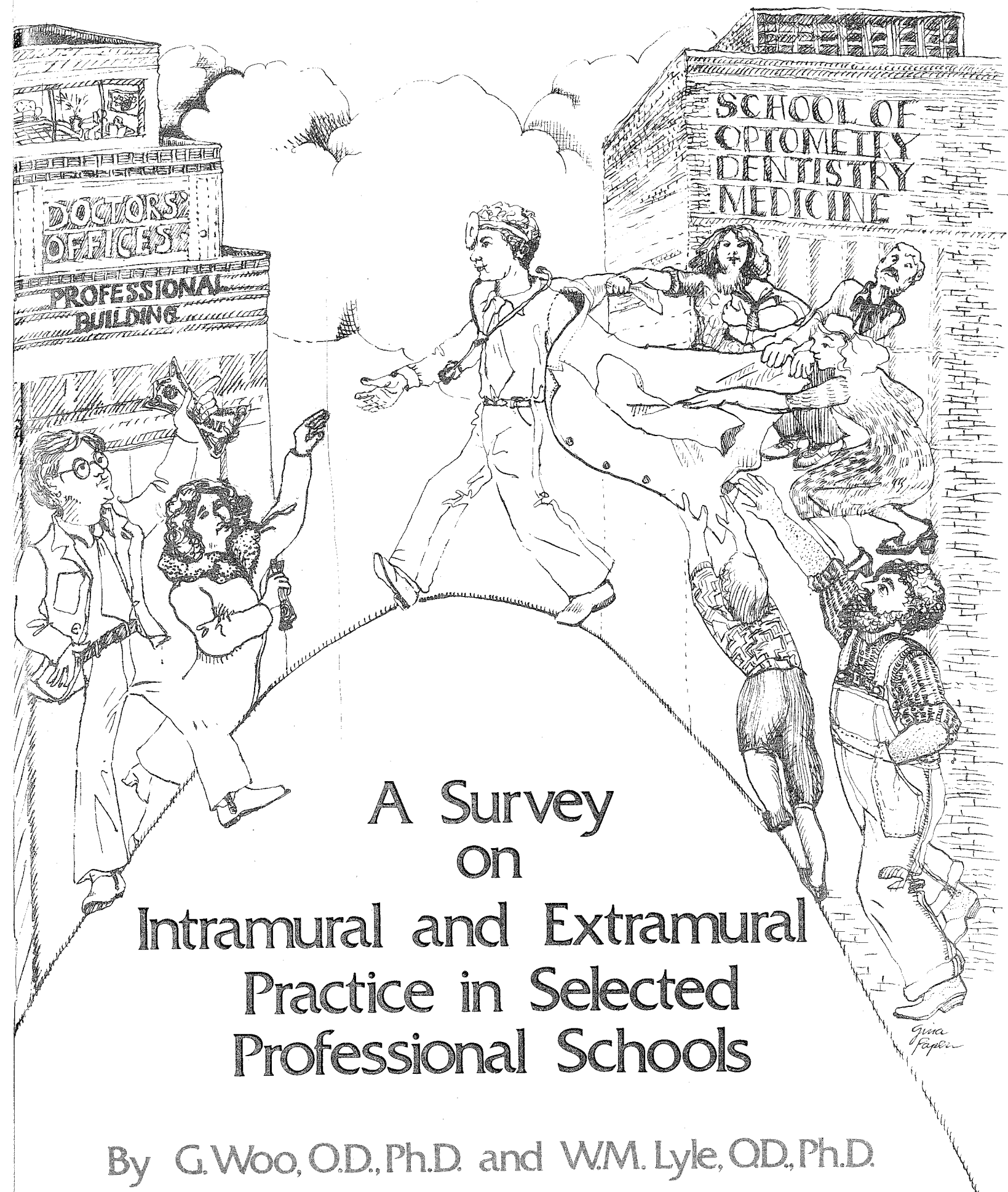
1. A Special Board of Directors meeting was called for the purpose of meeting with federal agency officials on implementing the new Health Professions Educational Assistance Act of 1976. Invited speakers included Dr. Whiteside, Director of the Bureau of Health Manpower; Dr. Watzman, Associate Director of Regional Programs; and Mrs. Swift, Director of Planning and Procedures Student Financial Affairs Division.

2. The Board also considered implementation of the new Veterans Omnibus Health Care Act of 1976.

The Board directed the Executive Committee to transmit to the Veterans Administration and to other agencies their strong support for fully implementing new salary schedules available under Title 38, and the implementation of a full field service for optometry. The Board also requested a meeting to be held between ASCO representatives and the Chief Medical Director of the Veterans Administration.

3. The Board also considered changes in the Student Financing sections in the Health Manpower Act. By consensus, the President, Executive Committee and Executive Director were asked to make initial contacts with federal agencies involved in the establishment of guidelines for optometric shortage areas. Further, the group was asked to obtain definition of students with exceptional financial need.

4. A working draft of actions by the Executive Committee on the seven areas of concentration developed by the Ad Hoc Committee on Purposes and Priorities at the previous Board meeting in Bloomington was submitted to the full Board for their consideration. The item would be taken up at the December Board of Directors meeting in Portland.



A Survey
on

Intramural and Extramural Practice in Selected Professional Schools

By G. Woo, O.D., Ph.D. and W.M. Lyle, O.D., Ph.D.

A committee to study intramural and extramural practices was formed at the School of Optometry, University of Waterloo in 1975. Subsequently, a questionnaire was developed and sent to fourteen optometry schools, twelve medical schools, and eight dental schools. Responses to this survey are the subject of this report.

Optometry

The questionnaire was sent to all optometry schools in Canada and the United States except Ferris State's College of Optometry. No reply was received from Indiana University, Illinois College, Pacific University, or the University of Waterloo.

Of the respondents, six institutions have policies pertaining to full time faculty members seeing private patients intramurally; four do not have policies on intramural practice; three do not allow faculty members to have access to private patients; and one school did not answer this question.

Two of the six that have intramural practices also have time limitations. Time limitation is defined as limiting practice to hours when the school clinics are not in operation. Three deans of optometry commented separately that there is some merit to intramural practice.

Of the six that allow intramural practice, only one imposes a ceiling on income and only one makes charges for use of clinical facilities.

On extramural practice, six schools allow their faculty members to conduct private practice on their own time, two do not allow such practice, and two did not reply to this question.

Medicine

The questionnaire was sent to the following medical universities: University of Calgary, University of Alberta, University of Toronto, Queen's University, University of Western Ontario, McMaster University, University of Ottawa, University of Montreal, University of California, Ohio State University, Indiana University, and University of British Columbia.

No replies were received from any of the U.S. schools and the University of British Columbia.

Of the eight responding institutions, six have written policies on intramural practice. However, all eight institutions allow their full time faculty members to see private patients. Insofar as any limitation of time for intramural practice is concerned, two schools limit

their faculty members to the extent that they may spend only 20% of their working week seeing private patients. The rest do not appear to have any time limit.

An interesting comment from one of the schools was that faculty members carry on their practices in hospitals which are not owned and operated by the University. It appears members of the faculty may then draw incomes from two different employers, i.e., the university and the local health insurance plan or the patient.

Six out of eight schools have established a ceiling on income derived from seeing private patients. There is no limit on the number of patients which may be seen by an individual faculty member. Only one school made charges to the faculty member for use of its clinical facilities, the other seven did not.

Three schools allow their full time faculty members to conduct extramural practice. The others, in general, do not endorse such practices although there are exceptions made.

Dentistry

The questionnaire was sent to the following universities: University of British Columbia, Dalhousie University, University of Toronto, University of Manitoba, University of Western Ontario, University of Alberta, University of Montreal, and Indiana University. No reply was received from Indiana University.

The responding schools allow their faculty members to maintain extramural practices, and four schools have intramural practice policies. Dalhousie University, University of British Columbia and University of Toronto do not have intramural practice arrangements for faculty members.

The Questionnaire

Dear Sir-

A committee of the faculty of the School of Optometry, University of Waterloo is seeking information in regard to the policy and methods by which various schools in the health field permit full-time faculty members to engage in part-time practice.

There seems to be two ways in which this is done: intra-mural practice where the faculty member sees private patients within the institution and extra-mural practice where patients are seen in an outside office.

Perhaps you would be willing to answer a few questions indicating your policy concerning each of these methods.

Intra-mural Practice.

1. Do you have a policy concerning full-time faculty members seeing private patients in University clinic facilities? Yes _____ No _____
(If yes, could you supply a copy of your policy?)
2. Is it allowed? Yes _____ No _____
3. Are there limitations? hours per week _____
maximum fees _____
maximum number of patients _____
other _____
4. Is a charge made to the practitioner for use of university facilities?
Yes _____ What is it? _____ No _____

Extra-Mural Practice.

- Is the full-time faculty member permitted to engage in extra-mural practice?
Yes _____ No _____
- Is this in addition to intra-mural practice or are they mutually exclusive?
Yes _____ No _____
- If yes, is there a limitation on hours? _____
patients? _____
fees? _____

We would welcome your thoughts concerning part-time practice by full-time professors.

Your assistance in providing this helpful information is much appreciated.

Sincerely,

W.M. Lyle
G. Woo

All have limitations on the amount of time that a faculty member may spend in practice. Six schools limit their faculty members to one day a week. The seventh stated there is a limit in terms of hours only.

Of the replies received, one stated that there is a limit and three have no limitation on total fees derived from private practice. Of the four that have intramural practice policies, two schools charge the individual faculty member for use of their clinical facilities when intramural practice is conducted.

Table I summarizes the respondents' answers from the three professions surveyed. There are potential advantages and disadvantages that need to be understood when considering the question of intra- and extramural practice. These pros and cons are based not only on the results of the questionnaire but also on discussions with full time faculty members at the School of Optometry, University of Waterloo.

ADVANTAGES:

1. The reputation of the institution may be enhanced through the clinical application of knowledge by faculty members. Problem patients, obscure conditions, controversial procedures and new instrumentation present challenges which may be best solved in an academic institution where sufficient time is allocated and where a variety of expertise may be assumed to be available.

2. The clinical involvement may enable faculty members to develop better methods of treatment. Practice may lead to improvement of skills and to improvement in clinical instruction.

3. Faculty members may retain a better contact with and an awareness of the services provided by laboratories, the costs of materials, the attitudes of patients, and the political climate vis a vis the other health professions and governmental agencies.

4. Faculty members may be more aware of the practical application of optometrical theory and better able to orient their classroom presentations to the clinical situation.

5. Faculty members could supplement their income and reduce the gap between the remuneration of professors and the income of practitioners.

6. The relationship between faculty and practitioners would be closer because both encounter similar clinical problems and could more readily communicate and interrelate with one another.

DISADVANTAGES:

1. If professors are to teach, grade papers, counsel students, serve on committees, read journals, prepare lectures and do research, their time is already very much occupied. If they were to practice as well, their excellence in all areas of endeavour simply cannot be maintained. A division of interest might occur. Some faculty members might decide to allocate too little of their time, energy, and effort to the teaching portion of their role, or to their research.

2. Faculty members may spend too much time in clinical practice merely to help increase their personal income. If some faculty members devote a portion of their time to practice, it might create pressure on all professors to engage in practice.

SPECIFIC ADVANTAGES TO INTRAMURAL PRACTICE ARE:

1. The town-gown controversy may be lessened because the educational institution is seen as a helping and caring institution involved with and serving the community directly.

2. It tends to provide some professors with the kind of environment in which they feel most effective, i.e., bridging the gap between research and clinical practice.

3. In many institutions, clinical practice could provide a means of augmenting the income of professors. This would help close the gap between university remuneration and professional incomes.

SPECIFIC DISADVANTAGES TO INTRAMURAL PRACTICE ARE:

1. Differential incomes generated when some faculty members engage in private practice is almost certain to be a source of conflict and potentially lead to a schism within the faculty.

2. Faculty members principally engaged in research and administration may be in conflict with those who engage in clinical practice intramurally.

3. Clinical experience received by students may suffer because patients may request to be seen by a professor and not by a student.

One specific advantage to extramural practice is that faculty become more visible in the community and are recognized as serving community needs directly. A specific disadvantage, on the other hand, would be that local practitioners may object to professors competing with them unfairly because of the professors position at the institution.

COMMENTS:

From the present survey, it appears that medical and dental schools are more organized and experienced in the conduct of either intramural or extramural practice. Should optometry faculty members decide to adopt such practices in the future, it is logical to assume that similar patterns will be developed. By exploring the pros and cons before implementation, it is hoped that an idea plan can be evolved.

		Optometry (N=10)	Medicine (N=8)	Dentistry (N=7)
Intramural Practice				
Stated Policy in Existence	Yes	6	6	4
	No	4	2	3
Allowed	Yes	3	8	4
	No	6		2
Limitation(s)	Yes	6	8	4
	No			
Charge made to Doctor	Yes	1	1	2
	No	5	7	2
Extramural Practice				
Allowed	Yes	6	3	7
	No	2	5	0
In addition to Intramural Practice	Yes	3	3	4
	No	2	2	3
Limitation(s)	Yes	1	3	6
	No	4	0	1

Guidelines and Standards for Visual Science Libraries Serving Optometric Institutions

Editor's Note: WE GOOFED. The Journal of Optometric Education printed a shorter version of the Guidelines and Standards for Visual Science Libraries in the Summer, 1976 issue (Volume 2, No. 2). The Journal gratefully acknowledges the comments received from Mrs. Elizabeth Egan and Mrs. Allison Howard who argued that the shortened version without the accompanying tables and charts greatly reduced the effectiveness of the presentation. Further, an undiscovered typographical error in the text of the first page unwittingly destroyed the English language to a point of maddening incomprehensibility.

Our apologies to the Association of Visual Science Librarians and to librarians Egan and Howard. The following is the complete text of the Guidelines and Standards for Visual Science Libraries as developed by the Association of Visual Science Librarians.

Report of a workshop - December 7, 1973 - San Francisco Association of Visual Science Librarians

Workshop Chairman: Alison Howard, School of Optometry Library, University of California, Berkeley. **Editor:** Elizabeth Egan, Optometry Library, Indiana University. **Participants:** Ada Berti, Engineering, Mathematics, and Science Library, University of Waterloo, Canada; Elizabeth Egan, Optometry Library, Indiana University, Bloomington; Hal Gibson, Director, Visual Science Information Center, University of California, Berkeley; Robert Girard, Visual Science Information Center, University of California, Berkeley; Marcia Henry, Science Librarian, Pacific University, Forest Grove, Oregon; Alison Howard, School of Optometry Library, University of California, Berkeley; Margaret S. Lewis, State College of Optometry Library, State University of New York; Linda Samuels, Health Science Librarian, University of Houston; Mollie Sittner, Southern California College of Optometry Library, Fullerton.

STATEMENT OF PURPOSE

Standards for school, university, college, and special libraries have been developed in the past years, but there is nothing yet applying to the specific requirements of optometric, or vision science, libraries.

This paper is an attempt to provide minimum standards and to set guidelines for physical facilities, budget and staff requirements, and development of collections to provide the required services and meet the information needs of the schools of optometry.

There are now 13 schools of optometry in the United States and two in Canada, each with some form of library service. Libraries serving schools of optometry are usually small and take one of these three forms: A. An independent library for a school physically or administratively unconnected with a parent institution. B. A branch library designed to serve an optometry school within a university, and able to draw on the resources of the general university library. C. A library which includes optometry with other sciences, as part of a university library system. No one of these kinds of libraries is necessarily better than another. Each has its advantages and drawbacks, and all three types have functioned well for the schools they serve.

It is hoped that these guidelines will be flexible enough to encompass all three types of libraries, will provide a measure for the assessment and evaluation of existing optometry libraries, and will serve as guidelines in the establishment of new ones.

COLLECTION

A vision science collection serving a college of optometry will reflect the institutional objectives and administrative organization of the college or of the college and its parent institution.

The varied institutional context of the libraries necessitates a statement of objectives and a definition of subject parameters if any evaluation is to be consistent. This will help ensure that the instructional needs of the educational program and the research needs of graduate students and faculty are adequately met and developed for each library.

The collection should include books, journals, and other materials needed to accomplish these objectives. Excellence should be maintained by routinely acquiring significant currently-published books and journals falling within the scope of the collection, and by systematic weeding practices. Non-book materials may be included in the library or in a separate audiovisual media department.

Availability of related material within a larger collection of which the optometry library is a part, or proximity to other large collections in the area, will allow a greater degree of specialization. If the collection must serve all of the informational needs of its users, broader parameters must be defined.

The following list includes the subject coverage of a vision science collection. The subjects are arranged by Library of Congress classes; each general area includes relevant sub-topics. The list cannot be considered complete, but rather should be regarded as a general outline to be modified according to local requisites. No attempt is made to include general reference materials such as dictionaries, encyclopedias, atlases, directories, etc.

(A broad discussion of the literature of vision science, relevant to these guidelines, appears in various publications by H.W. Hofstetter.)^{1,2}

Library of Congress Classification	Subject(s)
BF	Psychology: perception, visual; sensation, visual
C-E	History: events in which vision was important; biography related to vision
G	Geography, anthropology, folklore, custom: vision related
H	Statistics, economics, sociology: vision related, e.g., re blindness
L	Education: vision related, e.g., reading
N	Fine arts: color, perspective, illusion
QC	Physics of light and applications
QD	Colorimetry
QH	Microscopes and optical methods; photophysiology
QL	Anatomy of the eye, brain, and visual system: general
QM	Anatomy of the eye, brain, and visual system: human
QP	Physiology of the eye, brain, and visual system; color vision
QR	Microbiology: ocular
RA	Public health
RE	Ophthalmology: diseases, anomalies, and injuries to the eye, orbit, and visual system; optometry: refraction, vision testing and vision training, lenses and spectacles; social, legal, and professional aspects of eye care
RM	Pharmacology, general, ocular
SF	Comparative ophthalmology
T	Technology, optical: illumination; lasers; glass; motor vehicles, aeronautics, astronautics; photography; optical instruments and production; manufacture of eye wear, including metal-lurgy
U,V	Military - vision related
Z	Bibliography

Suggested collection levels are these: 1. Fulfillment of general information needs. 2. Adequate resources to support study of subject areas as related to vision care. 3. Adequate resources to support study through the Doctor of Optometry (professional) degree. 4. Adequate resources to support graduate study through the Ph.D. degree with some assistance from outside libraries.

SERVICE

The library's clientele should be provided with knowledge of and access to bibliographic and informational resources in the field of optometry for all courses in the optometry curriculum, as well as in support of research in vision science, as set forth in the institution's objectives.

The library's clientele will include some or all of the following: the students and faculty in the optometry and physiological optics curricula; the academic community outside the school of optometry; practicing optometrists and vision scientists in the community; others in the community at large who need bibliographic and informational services in the field of vision science. The library's community will be defined by the educational policies of the institution and the financial resources available for library service.

All users should have the following services available to them:

1. An efficient system of access to and circulation of library material, including access to photocopy services.
2. General and specialized reference and bibliographical assistance.
3. User instruction and assistance.
4. Access to other libraries through interlibrary loan or through network systems.
5. Announcement of library resources and services through appropriate publications, such as a library newsletter, handbook, acquisitions list, etc.

6. Reserved book services for the teaching program, the number of duplicate copies being considered in policy and budget decisions.

Specific user groups should have special services made available to them, e.g., new students should have a formal instructional program; graduate students should be provided with special formal instruction covering retrospective and current vision science bibliography, in depth; faculty should have liaison through which they receive current awareness service and inform the library on course content and assignments.

The library should be open a minimum of 40 hours per week.

Archival services. If the library is expected to assume archival services for the optometric institution it serves, extra space, equipment, and staff with specialized training will be needed, and therefore additional budget.

OPERATIONAL BUDGET

Budget should be adequate to meet the standards.

Separate budget considerations will have to be made for the three types of optometry school libraries:

A. The independent library for a school physically or administratively unconnected with a parent institution. This type needs a wider range of basic materials than do the other two types, and the full expense of the library is borne by the school.

B. The branch library designed to serve an optometry school within a university. Such a library is able to draw on the resources of the general university library, and in addi-

tion, a varying portion of the costs of the library may be subsumed in the university library budget rather than by the school of optometry.

C. The library which includes optometry with other sciences, as part of a university library system. Reference works, especially, can be shared with other departments in such a library, and varying portions of the costs may be assumed by the university and by the school of optometry.

Budget considerations should include personnel, printed materials, supplies, equipment, furniture, binding, user services expenses (information services, copy service, cooperative library projects, etc.), and audiovisual equipment and materials if included in library operations.

... a new library will need from double to triple the usual budget during its first three to five years ...

Budget for personnel. Personnel salaries must be consistent with regional and institutional salaries. Tables from recent studies on salaries for librarians may be found in recent journals.^{3,4} (Obviously adjustments for inflation are necessary, and new studies must be consulted in the future.)

Budget for printed materials. This budget will depend upon two factors: character and extent of the curriculum (number of courses, degrees, and specializations offered and how far these reach into such related fields as education, psychology, public health, medicine, pediatrics, etc.), and the availability of materials from parent institutions or co-operating libraries.

The largest budget will be needed by Type A, the free-standing school of optometry library which must operate almost entirely within its own resources. Type B library budgets will vary according to the historical development of the various associated library units and the feasibility of sharing resources. Type C libraries may be operated entirely by the parent institution, so that budgets can be isolated and identified only with difficulty, or must be estimated by using percentages.

In order to establish a basic collection and purchase serial back-files, a new library will need from double to triple the usual budget during its first three to five years.

Standards will be presented in terms of the items ("items" will for the most part represent monographs, but because of the way library statistics have been recorded, they will also include documents, single volumes of serials, and other pieces) added annually and the number of subscriptions maintained, with examples of amounts spent in the year 1972-73. These figures must be considered against the following background:

1. Inflation has affected library purchases to an extreme degree because so many publications are of foreign origin, and the prices have been raised by devaluation as well as by inflation.

2. Published literature in science increases geometrically in that it is estimated to double every 8.1 years.⁵ The bulk of this increase is in periodical literature.

Access to a broad range of serials is required because of the interdisciplinary nature of vision science and because of the dispersion of subject matter in scientific journals, as stated in Bradford's Law of Scattering.^{6,7} This law states that "If scientific journals are arranged in order of decreasing productivity of articles on a given subject, they may be

divided into a nucleus of periodicals more particularly devoted to the subject and several groups or zones containing the same number of articles as the nucleus, when the numbers of periodicals in the nucleus and succeeding zones will be as 1:n:n² . . ."⁶ Unpublished data collected by H. Gibson during his preparation of *Vision Index* indicate that for vision science 190 journals provide approximately 90% of the articles being indexed, while the total number of journals from which at least one article is indexed is around 940. A discussion of the periodical literature of vision science, relevant to these guidelines, appears in a paper by H.W. Hofstetter.² In this sampling study, he found that from 65 selected serial titles, a nucleus of 11 would provide half the citations on vision science. It must be borne in mind that articles published in the widely-scattered periphery may be of high value, and that some articles in the nucleus may be of negligible value. The optometry library will need to select according to the curriculum, research, and special needs of the school which it serves; thus, the "nucleus" of most-fruitful periodical titles will vary with each school.

Table 1 below gives the recommended number of new items (multi-volume or single-volume books; pamphlets; other separately published printed matter; microform reproductions of any of these) and annual subscriptions which an optometry library should have either on its own shelves or within a few hours' access.

TABLE 1

Recommended number of new items to be added annually	600	to	2000
Recommended number of annual subscriptions	200	to	400

The number of titles published in the field of vision science varies and is increasing. In 1972/73, the bound volumes (including bound journals) added to various Type A and B libraries ranged from 175 to 2000; the monograph budgets in these libraries ranged between \$750 and \$18,000. Similarly, the number of serial subscriptions varied between 61 and 240, whereas the serials budgets provided from \$1200 to \$6000. It was not possible to obtain comparable figures from the Type C libraries. Free and non-budgeted items are included in the above data, and therefore per-item costs cannot be figured. Furthermore, the higher figures are from a newly-developing library, whose costs will naturally be more during the first years of growth.

In gauging budget increases to allow for inflation, the following facts⁸ may be helpful. The average price for U.S. hard-cover books in 1973 was \$12.20—139.1% of the average price in 1967-69. In 1974, the corresponding figures are \$14.09 and 160.7%. U.S. hard-cover books on science averaged \$17.34 (136.9%) in 1973, and \$20.83 (164.4%) in 1974, reflecting both a higher price per book and a slightly faster rate of increase. The average price indexes for U.S. periodicals were 202% and 220% for the same two years respectively. Average prices for periodicals vary according to subject field, and those for medicine, chemistry and physics, psychology, engineering, and general science (vision science draws from all these fields), are all rising more rapidly than the average for periodicals as a whole. Table 2 shows the 1975 prices for U.S. periodicals in these fields.

TABLE 2^a
U.S. PERIODICALS

	Average price (1975)	Index (1975)*
Chemistry and physics	\$76.84	313.9
Medicine	42.38	218.7
Math, botany, geology, gen. science	35.95	235.0
Psychology	27.51	189.1
Engineering	26.64	265.6
All U.S.	19.94	230.3

*Index of 100.0 equivalent to average price for 1967-1969

A list of serials¹⁰ is appended to this report which forms a suggested base for selection; that is, many of these titles should be available in the library itself or in nearby libraries, always depending upon the particular scope of the library in question. The list makes no attempt to include titles scattered widely through many disciplines which regularly include a small but important number of articles on vision.

Binding. Budget should be sufficient to bind all materials intended for indefinite retention.

Miscellaneous. Sufficient budget should be provided to include subscription fees to information services and cooperative library projects.

Sufficient budget should be provided to cover expenses of library personnel for professional meetings and other professional activities.

When new programs are introduced into the curriculum, budgets should be increased to provide for additional materials and services as needed. Budget should be provided for copy service as needed. Additional budget should be provided for duplicate copies acquired in direct support of the curriculum. Budget for computer terminals linking the library to various data centers may soon become necessary to ensure excellence of service.

STAFF

The quality of library service depends ultimately upon the capability of the professional and support staff and the conditions of their employment. The competence of the staff depends upon the educational background and experience of the personnel. In addition, the relationship of the library staff with the teaching faculty and the administrative officers is vital to the development of library service.

The actual staffing requirements of optometric libraries will vary with the type of library and with the services expected, e.g., whether or not audiovisual services are combined with the library or are provided by separate staff in a different location, or whether cataloging is performed on site or furnished by a separate service. The following should provide guidelines for the staffing of all libraries.

The head of the library should be a full-time professional librarian who holds as a minimum requirement a MLS from an accredited library school. A ratio of two FTE support staff to each professional librarian is usually considered adequate.

The head librarian should be directly responsible to (as in the independent colleges of optometry) or have immediate liaison with (as in the schools which are parts of larger institutions) the chief administrative officer who is in charge of the educational program. The professional staff should have faculty status and be active participants in faculty committees and the educational planning of the college.

It is the librarian's responsibility to maintain the collection and services described earlier in this document. It is also the librarian's responsibility to carry on the business of the library: management of the staff; selection, acquisition, and classification of materials; design and use of space; preparation of budgets; etc. In these operations the librarian must have full cooperation from the business offices of the school.

PHYSICAL SPACE

Too often, vision libraries are planned by non-librarians unfamiliar with library procedures and requirements. This is unfortunate in that decisions made early in planning construction may either create permanent problems or eliminate them. Space planners should have clear ideas not only about the square feet, number of reader spaces, and amount of shelving necessary for the library, but also the relationship of different areas, traffic flow, security, location, and even the appearance and "feel" of the library.

The library should be situated close to the school which it serves, preferably centered in the traffic pattern among classrooms, faculty offices, and departmental offices, making it easy for all patrons to drop by. Lockers outside the library for personal belongings help reduce clutter in reading areas. Security for the collection, especially when the library is closed, is essential, as book and journal losses have become serious problems in recent years. The single entrance/exit (other than fire doors) should be constructed so as to permit an electronic surveillance installation, should it become feasible. Keys should be limited to the necessary library and custodial personnel. Shelving for unbound serials should be readily visible from the charge desk, to help reduce losses.

Requirements for space for library materials, for readers, and for staff are outlined below.^{11,12} A certain amount of flexibility in the application of these standards is desirable. Factors which can temper space requirements include, for example, the availability of other study space nearby; the hours of library opening; the amount of use of related libraries; amount of audiovisual material in use, and whether or not there are separate quarters for these; types of technical services performed; circulation policies.

Shelf space. Adequate shelf space in a new library should allow for 10 years' growth. A good working shelf space allows 100 books maximum per standard stack section, or 18 linear feet. (All standard library furniture and shelving are constructed in three-foot units; a stack section of standard seven-foot height consists of six shelves, three feet wide.) Thus a 5000-volume collection requires at least 50 stack sections, or 900 linear feet. In addition, a minimum of three feet between stack sections needs to be maintained. A calculation of 0.1 square feet of floor space per volume may give a rough guide as to space needed to store the book collection; but arrangement of shelves, inclusion of readers' spaces in the stacks, and growth projections for the library may all cause variations in this figure.

Ideally, no library should have its shelves so full that stack shifting is a routine necessity. When a library approaches this state, plans should be made for book storage in another location, for microfilming, for additional shelving, or for new library space.

Service areas. The circulation charge desk should be long enough to accommodate two attendants at times of peak load. It is easier for the desk attendant to maintain control of exiting traffic if he faces the users as they approach the exit. Circulation, reserve, and reference services may be

separate or combined, depending on the size of the library. A minimum of 80 square feet per FTE staff member for these functions should be planned. If technical processing—cataloging, receiving, binding preparation, etc.—is done in the library, more staff space will be necessary. Type A libraries, which perform all technical services, will need at least double the staff area required by Type B libraries. Since optometry libraries are usually small (under 20,000 volumes) and operate with minimum staff, it is helpful if all staff quarters, including the librarian's office, can be reasonably near the charge desk and exit. The librarian should have a separate office and telephone, yet be readily approachable from the reading areas.

Reserve books require separate shelf space and may be housed near the circulation desk. Expansion space should be available for reserves. Reference works are sometimes separated from the collection and discrete space provided for their use; sometimes this space is part of the general reading area. If an optometry library is part of a larger library, vision reference will be housed together with works from related science fields. Whatever arrangement is adopted, the use of these often cumbersome volumes should be aided by easy access, and space should be provided for simultaneous consultation by several users.

More important than the amount of space is the physical arrangement, which should provide proximity of reference works to the reference librarian, catalog to circulation, circulation desk to entrance/exit, and arrangement of staff space such that it does not interfere with user space, and vice versa.

Readers' space. Traditionally, college libraries have planned 6.25 square feet of reader space per FTE student. Another guideline is one seat for every five students. For a non-circulating library, many more seats are required; for a library open long hours, fewer may be necessary. If students live near the campus, they may spend more time studying in the library; a commuting population tends to check material out to read elsewhere. It is important to provide both individual study spaces (carrels) and tables for larger groups. Closed rooms, reasonably well sound-proofed and large enough for six to eight students to study together, are desirable. Areas planned for microform reading require adjustable lighting and on-the-desk lamps for note taking.

The library itself should be well lit, temperature controlled, attractive, and reasonably quiet. Display cases, comfortable furnishings, carpeting, a pleasing color scheme, well-placed signs, and other "non-essentials" are vitally important factors which determine, to some extent, not only how much the library will be used but also how the students and faculty feel about the library.

MULTIMEDIA

Development of multimedia, or audiovisual methods of recording knowledge, has raised the question as to which and how many such materials a library should include in its collections. Beyond the general principle that libraries should include all forms of recorded knowledge, a decision must be made as to which of these are appropriate and practical for any given special library and any individual section.

Complicating the question, particularly for optometric and other health science libraries, is the creation of audiovisual, multimedia, or educational materials centers, in which new teaching methods are being developed to handle large classes or speeded-up course work by means of electronic technology.

The housing, servicing, and lending of audiovisuals requires special facilities: special cases and cabinets; packaging and handling arrangements for multi-form sets (e.g. slides, text, and cassette which belong together); enclosed areas, possibly with controlled lighting and soundproofing; repair equipment and expertise; specially arranged electrical outlets; etc. The future of audio-visuals clearly includes television instruction. Schools which have pioneered in these fields are now producing their own materials. All these facts indicate that a long-term policy dealing with multimedia should become part of any optometry school's planning; and for the library, the extent of its involvement must be predicated upon its space, equipment, and personnel. The library which is expected to encompass multimedia should be so planned from the first, as the questions involved begin with architecture and floor plans. Problems arise from a lack of delineation of functions between the multimedia center and the library, and a failure to plan for staff, space, and equipment for these different functions.

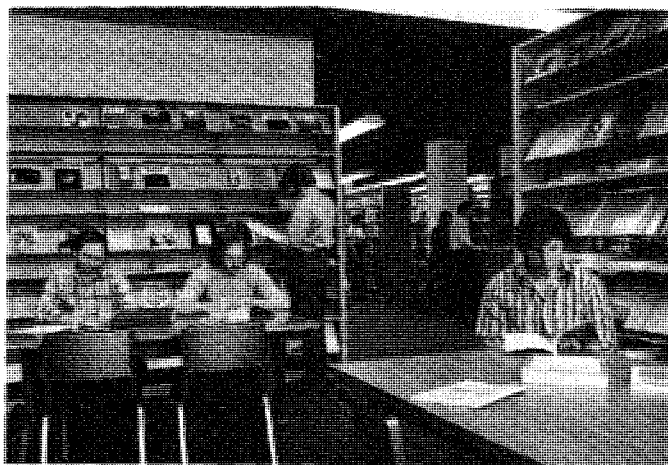


Photo by Roger Kranz

Dental schools, which have often provided relevant examples for optometry schools, have documented recommendations for multimedia.¹³ Separate departments for educational television and visual aids are outlined which involve separate staff for production and maintenance and separate space for viewing, listening, and storage.

A current survey of optometric schools shows no uniform practice regarding multimedia. Four schools have multimedia departments. Of these, two handle all services within the department, and two ask the library to manage certain kinds of record-keeping and circulation services. Three of the schools have photographic laboratories and/or other partial multimedia departments, and two of these schools expect the library to organize and circulate at least some audiovisual material. One school expects to combine the multimedia services entirely with the library. Usually, audiovisual material relegated to the libraries is part of class assignments, whereas material used as teaching aids by the instructional staff is kept by the instructor using it.

In making the following recommendations, the Association of Vision Science Librarians takes into consideration the evolving status of multimedia departments, and attempts to recognize viable choices.

1. The preferred long-term goal is a multimedia production department coordinated with the library, so that audio and visual media are available for study and teaching. Each department must be adequately staffed.
2. Current practices in each school may dictate the evolu-

tion of multimedia practices locally, and individual local developments may result in a wide variety of practices representing many degrees of combination with, or separation from, the library. Whatever the degree of separation or togetherness, there must be budgeting which realistically recognizes the necessity for special staff for production and maintenance; special space and equipment for storing, servicing, and presenting materials; and knowledgeable planning for common space and staff, so that the library and the multimedia enhance, rather than hamper, each other.

3. If there is currently no budget in the school for multimedia, the library budget should include an amount committed to purchase of audiovisual materials. Conventional book and serials budgets cannot be presumed to cover the high cost of audiovisual materials and the budgets for conventional library materials should not be diverted to multimedia, which are notoriously expensive.

Creation of these *Guidelines and Standards* should in no way imply that a high degree of sameness among optometric libraries is an end goal. Guidelines should direct and strengthen without curtailing the diversity which naturally develops among scattered institutions, a diversity which is a source of experiment, comparison, and ultimate strength.

REFERENCES

1. Hofstetter, H.W., ed. Transactions and reports of the conference on training in physiological optics, August 8-18, 1959, Indiana University. Bloomington, Indiana, 1959.
2. Hofstetter, H.W., Where is visual science? *Australian Journal of Optometry* 57:235-241, Aug., 1974.
3. SLA salary survey 1973. *Special Libraries* 64:594-628; 65: 41-42, Dec., 1973; Jan., 1974.
4. Gibley, C.W., et al. A constructed cost of podiatric education; report and summary of the study. *Journal of Podiatric Education* 4:5-20, Dec., 1973.
5. Hirschman, A. Keeping up with what's going on in physics. *Physics Today* 24:23-29, Nov., 1971.
6. Bradford, S.C. *Documentation*. London, Crosby Lockwood, 1948. p. 116.
7. Brookes, B.C. Bradford's Law and the bibliography of science. *Nature* 224:953-956, 1969.
8. *Bowker Annual of Library and Book Trade Information*, 20th ed., 1975. Ed. & Comp. by Madeline Miele & Sarah Prakken. New York, Bowker, 1975. p. 178, 180.
9. Brown, Norman B. Price indexes for 1975: U.S. periodicals and serial services. *Library Journal* 100:1291-1295, July, 1975.
10. Based on Gibson, Hal. A recommended serial list for optometry libraries. Berkeley, Visual Science Information Center, 1973. Mimeo.
11. Objectives and standards for special libraries. *Special Libraries* 55:672-680, Dec., 1964.
12. Medical Library Association. *Handbook of medical library practice*. 3rd ed. Chicago, 1970. Ch. 10, Library planning, furniture, and equipment.
13. *Dental school planning*. Washington, D.C., Public Health Service, 1962. (PHS Publ. 940).

Table 1. Basic Annual Salaries: 1959, 1967, 1970 & 1973

	1959	1967	1970	1973
No. Respondents	2,180	3,867	3,594	3,893
\$ 5,999 and under	85%	33%	11%	1%
6,000-6,999				2
7,000-7,999				2
8,000-8,999	7	17	11	6
9,000-9,999	3	15	14	9
10,000-10,999	2	12	13	11
11,000-11,999	1	7	12	10
12,000-12,999	1	5		
12,000-12,999	1	5	10	11
13,000-13,999		5	7	9
14,000-14,999		5	9	8
15,000-15,999				6
16,000-16,999		2	5	5
17,000-17,999				4
18,000-18,999	1			4
19,000-19,999		1	3	2
20,000-20,999				2
21,000-21,999			3	2
22,000-22,999		1		1
23,000-23,999				1
24,000-24,999				1
25,000-29,999		0	1	3
\$30,000 and over				1
	100%	100%	100%	100%
Mean	\$6,100	\$9,600	\$11,800	\$14,000
Median	5,800	9,000	11,000	12,500

*The preliminary report in the Sep 1973 *Special Libraries* (p.381) is affected slightly by reanalysis of "challenged" responses. Because 3,893 responses could be used instead of 3,757 (as used in the September report), the 1973 Mean Annual Salary is \$14,000 (\$100 higher than the \$13,900 in the preliminary report), while the 1973 Median Annual Salary is \$12,800 (\$100 lower than the \$12,900 reported in the Sep 1973 issue).
(From *Special Libraries*, v.64 (Dec. 1973). Permission to reprint kindly granted.)

A 1973 Guideline to Vision Serials

LIST 1 INDEXING AND ABSTRACTING SERIALS

EXCERPTA MEDICA, SECTION 12,
OPHTHALMOLOGY
GOVERNMENT REPORTS ANNOUNCE-
MENTS (AND INDEX)
INDEX MEDICUS
INTERNATIONAL AEROSPACE
ABSTRACTS
OPHTHALMIC LITERATURE
PSYCHOLOGICAL ABSTRACTS
SCIENCE CITATION INDEX
SCIENTIFIC AND TECHNICAL AEROSPACE
REPORTS
VISION INDEX
MONTHLY CATALOG
ERIC (EDUCATION RESOURCES
INFORMATION CENTER)

LIST 2 ENGLISH LANGUAGE SERIALS

ACTA OPHTHALMOLOGICA
ACTA OPHTHALMOLOGICA
SUPPLEMENTUM
ADVANCES IN OPHTHALMOLOGY
AEROSPACE MEDICINE
AMERICAN ACADEMY OF
OPHTHALMOLOGY AND OTOLARY-
GOLOGY. TRANSACTIONS
AMERICAN JOURNAL OF
OPHTHALMOLOGY
AMERICAN JOURNAL OF OPTOMETRY
AMERICAN JOURNAL OF PSYCHOLOGY
AMERICAN JOURNAL OF PUBLIC HEALTH
AMERICAN MEDICAL ASSOCIATION.
JOURNAL
AMERICAN MEDICAL ASSOCIATION.
SECTION ON OPHTHALMOLOGY.
TRANSACTIONS
AMERICAN OPHTHALMOLOGICAL
SOCIETY. TRANSACTIONS
AMERICAN OPTOMETRIC ASSOCIATION.
JOURNAL
AMERICAN ORTHOPTIC JOURNAL
ANNALS OF OPHTHALMOLOGY
ANNUAL REVIEW OF PHYSIOLOGY
ANNUAL REVIEW OF PSYCHOLOGY
APPLIED OPTICS
ARCHIVES OF OPHTHALMOLOGY
ARIZONA OPTOMETRIC ASSOCIATION.
JOURNAL
AUSTRALIAN COLLEGE OF
OPHTHALMOLOGISTS. TRANSACTIONS.
AUSTRALIAN JOURNAL OF
OPTOMETRY
AUSTRALIAN ORTHOPTIC JOURNAL
BIBLIOTHECA OPHTHALMOLOGICA
BRAIN RESEARCH
BRITISH JOURNAL OF OPHTHALMOLOGY
BRITISH JOURNAL OF PHYSIOLOGICAL
OPTICS
BRITISH JOURNAL OF PSYCHOLOGY
BRITISH MEDICAL JOURNAL
BRITISH ORTHOPTIC JOURNAL
CALIFORNIA OPTOMETRIC
ASSOCIATION. JOURNAL
CANADIAN JOURNAL OF
OPHTHALMOLOGY
CANADIAN JOURNAL OF OPTOMETRY
CHILD DEVELOPMENT
THE CONTACT LENS
CONTACT LENS MEDICAL BULLETIN
CONTACT LENS SOCIETY OF AMERICA.
JOURNAL
CONTACTO
DISPENSING OPTICIAN
DOCUMENTA OPHTHALMOLOGICA
EDUCATION OF THE VISUALLY
HANDICAPPED
EXPERIENTIA
EXPERIMENTAL EYE RESEARCH
EXPERIMENTAL NEUROLOGY
F.E.N.T. DIGEST
F.E.N.T. MONTHLY
ELECTROENCEPHALOGRAPHY AND
CLINICAL NEUROPHYSIOLOGY
EXPERIMENTAL BRAIN RESEARCH
HIGHLIGHTS OF OPHTHALMOLOGY
IDAHO OPTOMETRIST
ILLINOIS OPTOMETRIC ASSOCIATION.
JOURNAL
INTERNATIONAL CONTACT LENS CLINIC
INTERNATIONAL OPHTHALMOLOGY
CLINICS
INVESTIGATIVE OPHTHALMOLOGY

IOWA OPTOMETRIST
JAPANESE JOURNAL OF
OPHTHALMOLOGY
JAPANESE REVIEW OF CLINICAL
OPHTHALMOLOGY
JOURNAL OF COLOR AND APPEARANCE
JOURNAL OF COMPARATIVE AND
PHYSIOLOGICAL PSYCHOLOGY
JOURNAL OF COMPARATIVE
NEUROLOGY
JOURNAL OF COMPARATIVE
PHYSIOLOGY
JOURNAL OF EXPERIMENTAL CHILD
PSYCHOLOGY
JOURNAL OF EXPERIMENTAL
PSYCHOLOGY
JOURNAL OF GENERAL PHYSIOLOGY
JOURNAL OF NEUROPHYSIOLOGY
JOURNAL OF OPTOMETRY
JOURNAL OF PEDIATRIC
OPHTHALMOLOGY
JOURNAL OF PHYSIOLOGY
KANSAS OPTOMETRIC JOURNAL
MADRAS STATE OPHTHALMIC
ASSOCIATION. JOURNAL
MANUFACTURING OPTICS
INTERNATIONAL
MARYLAND OPTOMETRIC
ASSOCIATION. JOURNAL
MICHIGAN OPTOMETRIST
MINNESOTA OPTOMETRIST
MISSISSIPPI OPTOMETRIST
MISSOURI OPTOMETRIST
MODERN PROBLEMS IN
OPHTHALMOLOGY
NATURE
NEBRASKA OPTOMETRIC
ASSOCIATION. JOURNAL
NEW ENGLAND JOURNAL OF
OPTOMETRY
NEW JERSEY JOURNAL OF OPTOMETRY
NEW ORLEANS ACADEMY OF
OPHTHALMOLOGY. TRANSACTIONS
NEW OUTLOOK FOR THE BLIND
NEW ZEALAND OPTOMETRICAL
ASSOCIATION ARCHIVES
OPHTHALMIC OPTICIAN
OPHTHALMIC RESEARCH
OPHTHALMIC SURGERY
OPHTHALMOLOGICA
OPHTHALMOLOGICAL SOCIETIES OF THE
UNITED KINGDOM. TRANSACTIONS
OPHTHALMOLOGICAL SOCIETY OF
EGYPT. BULLETIN
OPHTHALMOLOGICAL SOCIETY OF NEW
ZEALAND. TRANSACTIONS
OPHTHALMOLOGICAL SOCIETY OF
NORTHERN GREECE. ARCHIVES
OPHTHALMOLOGY DIGEST
OPTICAL INDEX
OPTICAL JOURNAL AND REVIEW
OF OPTOMETRY
OPTICAL MANAGEMENT
OPTICAL SOCIETY OF AMERICA.
JOURNAL
OPTICAL WORLD
OPTICIAN
OPTICS
OPTOMETRIC MANAGEMENT
OPTOMETRIC WEEKLY
OPTOMETRIC WORLD
THE OPTOMETRIST . . .
OPTOMETRY TODAY
OREGON OPTOMETRIST
ORIENTAL ARCHIVES OF
OPHTHALMOLOGY
PACIFIC COAST OTO-OPHTHALMOLOGI-
CAL SOCIETY. TRANSACTIONS

PENNSYLVANIA OPTOMETRIST
PERCEPTION
PERCEPTION AND PSYCHOPHYSICS
PERCEPTUAL AND MOTOR SKILLS
PHILIPPINE JOURNAL OF
OPHTHALMOLOGY
PHOTONS
PRECISION-COSMET DIGEST
QUARTERLY JOURNAL OF EXPERIMEN-
TAL PSYCHOLOGY
R.O. JOURNAL OF OPTICIANRY
RADHARC
ROCKY MOUNTAIN OPTOMETRIST
ROYAL SOCIETY OF MEDICINE.
PROCEEDINGS
SCANDINAVIAN JOURNAL OF
PSYCHOLOGY
SCIENCE
SCOTTISH OPTICIAN
SIGHT-SAVING REVIEW
SOUTH AFRICAN ARCHIVES OF
OPHTHALMOLOGY
SOUTH AFRICAN OPTOMETRIST
SOUTH AFRICAN REFRACTIONIST
SOUTHERN JOURNAL OF OPTOMETRY
SOUTHERN MEDICAL JOURNAL
SURVEY OF OPHTHALMOLOGY
TEXAS OPTOMETRIC ASSOCIATION.
JOURNAL
VISION RESEARCH
WISCONSIN OPTOMETRIC ASSOCIATION.
JOURNAL
YEARBOOK OF OPHTHALMOLOGY

LIST 3 FOREIGN LANGUAGE SERIALS

ABHANDLUNGEN AUS DEM GEBIETE
DER AUGENHEILKUNDE, SAMMLUNG
VON MONOGRAPHIEM
ACTA OPHTHALMOLOGICA
IUGOSLAVICA
ACTA SOCIETATIS OPHTHALMOLOGICAE
JAPONICAE
ALBRECHT VON GRAEFES ARCHIV
FUR KLINISCHE UND
EXPERIMENTELLE OPHTHALMOLOGIE
ANNALES D'OCULISTIQUE
ANNALI DI OTTALMOLOGIA E CLINICA
OCULISTICA
ANNEE THERAPEUTIQUE ET
CLINIQUE EN OPHTALMOLOGIE
ARCHIVES D'OPHTALMOLOGIE ET REVUE
GENERAL D'OPHTALMOLOGIE
ARCHIVIO E RASSEGNA ITALIANA
DI OTTALMOLOGIA
ARCHIVOS DE LA SOCIEDAD ESPANOLA
DE OFTALMOLOGIA
ARCHIVOS DE OFTALMOLOGIA DE
BUENOS AIRES
ARQUIVOS BRASILEIROS DE
OFTALMOLOGIA
ARQUIVOS PORTUGUESES DE
OFTALMOLOGIA
AUGENOPTIKER
AUGENSPIEGEL
BOLLETTINA D'OCULISTICA
BUECHEREI DES AUGENARZTES . . .
BULLETIN DE LA SOCIETE BELGE
D'OPHTALMOLOGIE
BULLETIN DES SOCIETES
D'OPHTALMOLOGIE DE FRANCE
LES CAHIERS DE L'OPTIQUE DE
CONTACT
CESKOSLOVENSKA OFTALMOLOGIE
CLINIQUE OPHTALMOLOGIQUE
CONTACT-LINSF

DEUTSCHE OPHTHALMOLOGISCHE
GESELLSCHAFT. BERICHT
FOLIA OPHTHALMOLOGICA JAPONICA
FONDAZIONE GIORGIO RONCHI. ATTI
GIORNALE ITALIANO DI
OPHTHALMOLOGIA
HELLENIKE OPHTHALMOLOGIKE
HETAIRESIA, ATHENS. DELTION
JAPANESE JOURNAL OF CLINICAL
OPHTHALMOLOGY
JOURNAL FRANCAIS
D'ORTHOPTIQUE
JOURNAL OF THE JAPAN CONTACT
LENS SOCIETY
KLINIKA OCZNA
KLINISCHE MONATSBLETER FUR
AUGENHEILKUNDE UND AUGENARZT-
LICHE FORTBILDE
KYBERNETIK
MINERVA OPHTHALMOLOGICA
NEUES OPTIKERJOURNAL

OPHTHALMOLOGICA
OPHTALMOLOGICHESKII ZHURNAL
OPHTHALMOLOGIKA HRONIKA
OPHTHALMOLOGISTE FRANCAISE
OPHTHALMOLOGICA IBERO-AMERICANA
OPHTHALMOLOGY (GANKA)
L'OPTICIEN BELGE DE BELGISCHE
OPTICIEN
L'OPTICIEN LUNETIER
EL OPTICO PROFESIONAL
OPTOMETRIE . . .
EL OPTOMETRISTA
PFLUGERS ARCHIV . . .
PROBLEMY FIZIOLOGICHESKOI OPTIKI
REVISTA BRASILEIRA DE
OPHTHALMOLOGICA
REVISTA DE LA SOCIEDAD
COLOMBIANA DE OPHTHALMOLOGIA
REVISTA DE LA SOCIEDAD
MEXICANA DE OPTOMETRIA
REVISTA OPHTHALMOLOGICA

VENEZOLANA
REVUE CHIBRET
REVUE D'OTO-NEURO-OPHTHALMOLOGIE
REVUE INTERNATIONALE DU
TRACHOME
SOCIEDAD AMERICANA DE OPHTALMO-
LOGIA Y OPTOMETRIA. ARCHIVOS
SOCIEDAD MEXICANA DE CONTACTOLO-
GIA. ARCHIVOS
SUDDEUTSCHE OPTIKERZEITUNG
SZEMFESZFT
VESTNIK OPHTALMOLOGII

*BASED ON GIBSON, H., RECOMMENDED
SERIAL LIST FOR OPTOMETRY LIBRAR-
IES. BERKELEY, VISUAL SCIENCE INFOR-
MATION CENTER, 1973. (NOTE: TITLE
CHANGES HAVE OCCURRED FOR SOME
OF THESE SERIALS, A MORE CURRENT
LIST IS IN PREPARATION.)

Table 7. Non-Instructional Support Staff Salaries

Position	Rate	Instructional Communications		Library		Store		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost
Administrator	25,000	1	\$ 25,000					1	\$ 25,000
Artists	11,000	2	22,000					2	22,000
Medical									
Photographer	15,000	1	15,000					1	15,000
Photo Aides	6,500	2	13,000					2	13,000
Print Shop									
Manager	12,000	1	12,000					1	12,000
Printer	8,500	1	8,500					1	8,500
Printer Aides	6,500	2	13,000					2	13,000
MTSC Operator	13,000	1	13,000					1	13,000
TV Engineer	17,000	1	17,000					1	17,000
CCTV									
Technician	8,000	2	16,000					2	16,000
A-V									
Technicians	7,000	2	14,000					2	14,000
Chief									
Librarian	15,000			1	\$ 15,000			1	15,000
Reference									
Librarian	11,000			1	11,000			1	11,000
Serials									
Librarian	11,000			1	11,000			1	11,000
Library Aides	4,500			2	9,000			2	9,000
Manager	9,500					1	\$ 9,500	1	9,500
Secretary	8,000	1	8,000	1	8,000			2	16,000
Clerk-Typist	6,000	2	12,000	3	18,000	1	6,000	6	36,000
Total Salaries			\$188,500		\$ 72,000		\$ 15,500		\$276,000
22% Fringe Benefits			41,470		15,840		3,410		60,720
Total		19	\$229,270	9	\$ 87,840	2	\$ 18,910	30	\$336,720
Unit Constructed Cost			574.93		219.60		47.27		841.80

(From *Journal of Podiatric Education*, vol. 4 (Dec. 1973). Permission to reprint kindly granted.)

Pharmacology

Curriculum Guidelines for

Continuing Education Courses

Editor's Note: In response to the multiple requests for copies of ASCO's position on the content of pharmacology courses provided in continuing education, the **Journal of Optometric Education** is pleased to include in this issue guidelines adopted in 1975. The guidelines were developed after months of consideration by a special committee of ASCO's Council on Academic Affairs, Dr. J. Boyd Eskridge, Chairman.

The Board action provided advice to providers of continuing education in pharmacology on the extent and scope of an optimum course outline in pharmacology. The guidelines also recommended that a comprehensive examination procedure be established to evaluate each student as to his skill and competency in the use of diagnostic pharmaceutical agents and relevant instrumentation. The guidelines were originally published as a special issue of ASCOPE, June 6, 1975.

-
- I. Purpose:** To establish guidelines for continuing education courses in pharmacology for practicing optometrists.
- II. Course objectives:** To increase the optometrist's knowledge of:
- A. The systemic effects of systemic medications from a mechanistic, diagnostic and therapeutic standpoint,
 - B. The ocular effects of systemic medications from a mechanistic, diagnostic and therapeutic standpoint,
 - C. The ocular effects of ocular drugs from a mechanistic, diagnostic and therapeutic standpoint,
 - D. The systemic effects of ocular drugs from a mechanistic, diagnostic and therapeutic standpoint,
 - E. Diagnostic ocular pharmaceutical agents (DPA)—theory and practice.
- III. Guidelines for the course content.**
- A. General Pharmacology
 - 1. Principles of Drug Actions
 - a. Dosage forms
 - b. Routes of administration
 - c. Pharmacodynamics
 - (1) absorption
 - (2) distribution
 - (3) fate (metabolism)
 - d. Mechanisms of action
 - (1) agonists and antagonists
 - (2) receptors and acceptors
 - (3) synergism, additivity and competitive antagonism
 - 2. Host Factors and Placebos
 - 3. Drug Categories (to include adverse ocular and systemic effects)
 - a. Neuropharmacologic agents
 - (1) anesthetics
 - (2) CNS depressants (general)
 - (3) effects of drugs on synaptic transmission
 - (4) major and minor tranquilizers
 - (5) antidepressants
 - (6) CNS stimulants (general)
 - (7) analgesics (selective CNS drugs)
 - b. Cardiovascular agents
 - (1) hemopoietics
 - (2) antihypertensives
 - (3) anticoagulants
 - (4) cardiac glycosides
 - (5) antiarrhythmics

Pharmacology

Critical Thinking

Continuing Education Courses

- (6) vasolidators
- c. Renal agents
- d. Gastro-intestinal agents (especially anti-cholinergics)
- e. Endocrine drugs (including steroids and the birth control pills)
- f. Antiallergic agents
- g. Antibiotic-chemotherapeutic agents
- h. Antifungal agents
- i. Disinfectants
- j. Vitamins
- k. Antiviral agents
- l. Cancer chemotherapeutics
- m. Over-the-counter (OTC) agents
- 4. Drug Abuse
- 5. Drug Contraindications During Pregnancy
- B. Ocular Pharmacology
 - 1. Principles of Drug Actions
 - a. Dosage forms
 - b. Routes of administration
 - c. Pharmacodynamics
 - (1) absorption
 - (2) distribution
 - (3) fate (metabolism)
 - 2. Drug Categories, to include adverse ocular and systemic effects, and
 - a. Neuropharmacologic agents (autonomics)
 - (1) review of nervous systems
 - (2) autonomic drugs
 - ((a)) sympathomimetics
 - ((b)) parasympathomimetics
 - ((c)) sympatholytics
 - ((d)) parasympatholytics
 - (3) ocular anesthetics
 - b. Agents affecting trans-membrane fluid transport
 - c. Antibacterial agents
 - d. Antiinflammatory agents
 - (1) antihistamines
 - (2) steroids
 - (3) sympathomimetics
 - (4) parasympatholytics
 - e. Antiviral agents
 - e. Antifungal agents
 - 3. Differential Diagnosis of Ocular Neuromuscular Disorders

- 4. Review of Ocular Side Effects of Systemic Drugs
- 5. Review of Systemic Side Effects of Ocular Drugs
- 6. Review of Ocular Side Effects of Ocular Drugs
- 7. Ocular Urgencies and Emergencies, including glaucoma management
- 8. Drug Contraindications During Pregnancy
- 9. Medical Urgencies and Emergencies
- 10. Malpractice and Jurisprudence

IV. Teaching/Learning Activities

- 1. Patient History
 - a. Medical history
 - b. Patient's current drug regimen, and the effects of these drugs on ocular structure and function.
- 2. Sterile technique—proper instillation of "drops"
- 3. Refractive Examination and Fundus Examination
 - a. Pre-medication procedures
 - (1) advice to patients (effects of DPAs)
 - (2) tonometry
 - (3) angle evaluation
 - b. Application of mydriatic/cycloplegic and related examination procedures
 - c. Post-medication procedures
 - (1) corneal examination
 - (2) tonometry
 - (3) advice to patient (i.e., return of pupil to normal, etc.)
 - d. Diagnostic techniques and instrumentation
 - (1) tonometry, including Goldmann applanation
 - (2) angle evaluation with the biomicroscope, including gonioscopy
 - (3) stain analysis
 - (4) monocular and binocular fundus examination, including indirect ophthalmoscopic and biomicroscopic procedures
- 4. Clinical Competency
 - a. Comprehensive examination procedure will be established to evaluate each student as to his skill and competency in the use of DPAs and relevant instrumentation, and
 - b. The effect of systemic medication on ocular structure
 - c. The effect of ocular instillations on systemic structure and function.

American Optometric Association

Report to House of Delegates

June 1, 1976

Council on Optometric Education
John D. Costabile, O.D., Chairman

Having been appointed Chairman last June by President Howard Winton, I am privileged to report to you on the activities of the Council on Optometric Education during this past year. But before a summary of the Council's activities, perhaps you will indulge me a few words by way of background.

In most countries of the world the quality of education is regulated by government agencies. In the United States, although many aspects of life are subject to pervasive governmental regulation, the quality of education is not among them. This area has been left to private, voluntary accrediting agencies to regulate.

Our country's system of voluntary, non-governmental accreditation began to develop during the latter part of the 19th Century and operated for many years without a great deal of public awareness or official scrutiny. Two recent developments, however, have changed this situation radically.

First, in the 1950s the federal government, as a result of several newly enacted statutes, began to make available large sums of public money to aid higher education. In order to assure that this money would be used as intended, the government decided to rely on accreditation as one of its eligibility standards. And, in order to assure that accreditation would be an effective eligibility standard, the Office of Education in the Department of Health, Education, and Welfare was created and charged with the task of, among other things, evaluating and recognizing national accrediting agencies which are reliable indicators of the quality of education offered by accredited institutions. Thus, in addition to other requirements, an educational institution may be accredited by a

recognized accrediting agency and a student must attend an institution which is accredited by a recognized accrediting agency to be eligible for federal aid funds.

Second, in the 1960s accreditation, along with many other things, became the subject of widespread consumer criticism which was directed generally toward the universal fact of life that practice very often does not live up to theory. Educational institutions became known as "providers" and students became known as "consumers" of a service. And accreditation came to be looked upon as a consumer protection activity and was, therefore, forced to deal with a whole new set of concerns.

Thus, today, in stark contrast to past practice, accreditation operates in the light of *both* widespread public awareness *and* close official scrutiny. These developments have wrought fundamental changes not just in the form but in the substance of accreditation. Originally, accreditation involved the regulation of the quality of education by associations of the educational institutions themselves or the professions of which they were part. Little or no public or outside participation was provided or even allowed. As a consequence, accreditation was viewed as a closed society operating solely for the selfish benefit of its members. Understandably under the circumstances, thoughtful individuals and groups called into question the procedures and standards of accrediting agencies, and the quality statement which is inherent in being "accredited."

The situation today, however, is very different. Stimulated by the Office of Education, which on August 20, 1974, adopted revised "Criteria for Nationally

Recognized Accrediting Agencies and Associations," and by other authorities and leaders, accrediting agencies began to look critically at themselves to assess their strengths and weaknesses and to develop solutions to their problems. Several specific problems soon became apparent. First, the procedures by which accreditation classifications were granted, denied, reaffirmed, revoked, and reinstated were often unwritten or incompletely written, vague, imprecise, and variable according to the circumstances in some cases.

Second, the various interests effected by accreditation were often not reflected in the composition of the decision-making bodies of accrediting agencies. And third, all too often accreditation decisions were affected by political considerations relative to other accredited schools or the profession of which the accrediting agencies were part.

Having identified these problems, accrediting agencies set about solving them. Much of the activity of the Council on Optometric Education over the past two years has been in this direction. As I reported to you last year, the Council's membership was expanded to include a representative of the lay public, and the Council's *Manual of Accrediting* was revised and expanded to two documents: *Manual of Evaluation Requirements and Guidelines: Professional Optometric Degree Programs* and *Manual of Evaluation Procedures*.

Last year's revision focused on clarification and accreditation standards, while this year's effort was directed primarily toward accreditation procedures. The idea has been to state as clearly as possible the quality standards our schools will be expected to meet, and to provide unambiguous, complete, *and fair* procedures by which to implement these standards. In addition, the Council has devoted considerable attention to the problem of autonomy.

While operating within the AOA structure, it is crucial to the credibility of the Council that it exercise its independent judgment as to the quality of optometric educational programs. It is certainly not implied that improper attempts have been made to influence the Council's actions. This is not and has not been the case. Nevertheless, it must be made clear to the public that the Council on Optometric Education is an independent, quality-conscious accrediting agency. As a practical matter, the appearance of propriety is just as important as propriety itself.

More specifically, the Council has spent a significant amount of its time this year in preparation for its regular, four year review for renewal of its recognition as a national accrediting agency by the Office of Education. Council staff is currently preparing a "Petition for Renewal of Recognition" to be submitted to the Office of Education in September, with the decision on the "Petition" being made in December. The "Petition" will set forth the Council's perception of how it meets the Office of Education's "Criteria for Nationally Recognized Accrediting Agencies and Associations." These "Criteria" deal with such subjects as organization, financial support, competency of personnel, reliability, autonomy, and due process in accrediting procedures, i.e., notice, hearings, and appeals. These are, in effect, comparable to the basic areas that the Council evaluates when it conducts an on-site visitation to a school or college of optometry.

In addition to the self-improvement activities I just detailed, the Council conducted its usual program of continuous review and evaluation of optometric educational programs. Specifically, on-site visitations were conducted at the University of California, Berkeley, School of Optometry; the State University of New York, State College of Optometry; and the Massachusetts College of Optometry. In addition, the Council conducted a visitation to the first optometric residency program in the country, the Kansas City Veterans Administration Optometric Residency Program.

This residency program, conducted in connection with the Kansas University Medical Center, represents one of the most important recent developments in optometric education.

The following schools and colleges of optometry have achieved the accreditation classification of "Accredited*": Illinois College of Optometry; Indiana University, School of Optometry; Massachusetts College of Optometry; Pacific University, College of Optometry; Pennsylvania College of Optometry; Southern California College of Optometry; Southern College of Optometry; the Ohio State University, College of Optometry; the University of Alabama in Birmingham, School of Optometry/The Medical Center; the University of California, Berkeley, School of Optometry; the University of Houston, College of Optometry; the University of Waterloo, School of Optometry; and the State University of New York, State College of Optometry.

Also, seven paraoptometric educational programs have achieved "Accredited*" status: Lakeshore Technical Institute (optometric assistant program); Fisher Junior College/MCO (optometric technicians associate degree program); Indiana University (optometric technicians associate degree program); Miami-Dade Junior College (optometric technicians associate degree program); University of Alabama in Birmingham (optometric technicians associate degree program); Community College of the Air Force, Randolph AFB (military program); and School of

Health Care Sciences, Sheppard AFB (military program).

The developing scope of optometric practice will necessitate greater utilization of paraoptometric personnel in the future, and the Council is interested in fostering the concurrent development of more high quality paraoptometric educational programs.

For their service over the past year and past years, the members of the Council should be honored: Drs. Emile J. Bernard, Jr.; Irvin M. Borish; Robert W. Head; A. John Rose; Bradford W. Wild; and Alfred A. Rosenbloom, Jr. This should not be interpreted as a eulogy, for he will continue his service to the profession on the Council on Clinical Optometric Care, but leaving the Council this year after three full terms, 18 years, more than anyone else in the history of the Council, is Dr. Rosenbloom. We will miss him. His place will be taken by Dr. Max L. DeBolt of Winona, Minnesota.

**Accredited*—An accreditation classification granted to an educational program indicating that the program in general achieves or exceeds the basic requirements for accreditation. This accreditation classification specifies that the program has no serious deficiencies or weaknesses; however, recommendations or suggestions relating to program enhancement are generally included in the evaluation report. A Council evaluation, including a site visit, is required to earn the "accredited" classification. Even though fully "accredited," an institution may nonetheless be required to submit periodic (usually yearly) reports to the Council detailing the progress which the institution has made toward implementation of the recommendations of the last visitation report.

1975-76 ANNUAL SURVEY OF OPTOMETRIC EDUCATIONAL INSTITUTIONS

Preadmission College and University Credit Number of First Year Students Enrolled With:							
	2 + Yrs.	3 + Yrs.	4 + Yrs.	B.A., B.S.	M.A., M.S.	Ph.D.	TOTAL
ICO	32	38	7	70	2		149
IU	38	9		22			69
MCO	3	10	3	16	5	9	91
PCO	2	13	2	114	7		138
PU	13	24	4	41	3		85
SCCO	14	19	5	56	4		98
SCO	28	39	12	68	5		152
SUNY	0	5		34	2		41
TOSU	23	14	3	16	1		57
UAB	4	10	1	23	2		40
UCB	7	26		28	3		64
UH	18	12	8	30	1		69
U.S. TOTALS	182	219	45	563	35	9	1053

1975-76 ANNUAL SURVEY OF OPTOMETRIC EDUCATIONAL INSTITUTIONS

Students - Enrollments Full-Time Students Enrolled in the Professional Degree Program

	First Year		Second Year		Third Year	
	Male	Female	Male	Female	Male	Female
ICO	130	21	127	18	124	12
IU	55	15	53	16	57	11
MCO	70	21	62	18	48	11
PCO	116	22	129	10	123	10
PU	79	6	74	7	60	7
SCCO	90	8	98	7	78	7
SCO	138	14	138	6	157	8
SUNY	37	4	17	6	18	4
TOSU	49	8	50	9	46	5
UAB	35	6	21	2	18	2
UC	50	14	43	20	41	19
UH	58	11	59	12	50	7
U.S. TOTALS	907	150	871	131	820	103
UW	47	12	46	11	47	12
ACCRED. SCHOOL TOTALS	954	162	917	142	867	115

	Fourth Year		TOTALS		
	Male	Female	Male	Female	Total
ICO	129	9	510	60	570
IU	61	11	226	53	279
MCO	57	11	237	61	298
PCO	141	4	509	46	555
PU	66	2	279	22	301
SCCO	59	4	325	26	351
SCO	123	6	556	34	590
SUNY	17	3	89	17	106
TOSU	48	4	193	26	219
UAB	23		97	10	107
UC	46	13	180	66	246
UH	64	5	231	35	266
U.S. TOTALS	834	72	3432	456	3888
	45	7	185	42	227
ACCRED. SCHOOL TOTALS	879	79	3617	498	4115

TOTAL STUDENTS
Permanent Residence By States

	ICO	IU	MCO	PCO	PU	SCCO	SCO	SUNY	TOSU	UAB	UCB	UH	US TOTAL	UW	GRAND TOTAL
AL		1					2			73			76		76
AK		1			3								4		4
AZ	2			1	3	8	2				2	1	19		19
AR			1				46					4	51		51
CA	9		5		38	161	3				202	2	420		420
CO	7			1	13	15	1						37		37
CT	4	1	20	11		2	5						43		43
DE			2	7		1	1						11		11
DC			1	1									2		2
FL	12	7	4	9	8	11	53			4	2	16	126		126
GA	1	3	1			1	41			2			49		49
HI	3	1		1	6	5	1		1		1		19		19
ID					9	3	1		2				15		15
IL	163	14	2		5	5	7		1				197		197
IN	4	172		1	1	6	1						185		185
IA	50	4			8	4	6					4	76		76
KS	4				3	4	21					14	46		46
KY	3	2		1			14		2	7		11	40		40
LA	1			1		1	26			3		17	49		49
ME		1	18	7	3	1	1		1		1		33		33
MD	8	3	13	34		3	15			1	2		79		79
MA	3	1	95	9	4	2	1				3	1	119		119
MI	74	8	3	8	6	5	10	1	8		2	1	126		126
MN	25	3			18	3	3				1		53		53
MS		3				1	34			1		4	43		43
MO	19	4		1		1	11					1	37		37
MT	7				18	5	1				1	1	33		33
NE	11				5	5	13					6	40		40
NV	1		1		5	6							13		13
NH			8	2	2						1		13		13
NJ	3	3	9	66	1	2	3	6				1	94		94
NM					4	7	1		1		3	2	18		18
NY	31	6	70	125	7	20	10	94	1		6	2	372		372
NC	2	3	1	17		1	52			6		1	83		83
ND	8				5	3	1						17		17
OH	13	4	6	8	3	6	4		190				234		234
OK	1				4	4	41					19	69		69
OR			1		35	5	1	1					43		43
PA	17	6	5	212	1	1	3	1	7		1	1	255		255
RI			12	3	2	1							18		18
SC	2	2	1				30			4			39		39
SD	5	1		1	2		1					2	12		12
TN	3		1			1	79						84		84
TX			1		1	3	4					147	156		156
UT	2	1			8	11	1						23		23
VT			3	2			1						6		6
VA	4	3	5	19	2	1	12			5			51		51
WA	6		1		45	11	1						64		64
WV	5	2		6			20		3				36		36
WI	52	12	1		4	6	4		2		4	1	86		86
WY		2			13	6	1				1		23		23
CZ															
PR		1	2	1									4		4
USP															
ALB					3	1						4	16	16	20
BC					2								2	8	10
MAN	1												1	5	6
NB														10	10
NF														3	3
NS														2	2
ONT														169	169
PEI															
QUE														1	1
SAS														13	13
C.TER.			3					1					4		4
O.COUNT	2	4	2		1	3		2		1	13	7	35		35
TOTALS	568	279	298	555	301	352	590	106	219	107	246	266	3887	227	4114

Establishment of the Optometry



Program at Indiana University

Illustration by William P. Durkee

By Francis Moshos

The concept of a program in Optometry at Indiana University is credited to Noah Bixler and John Davey as far back as 1940, but it was in 1944 that the dream became a project. It was in that year that Dr. Davey, secretary of the Indiana State Board, asked Dr. Irvin Borish, who had just begun practice in Kokomo, Indiana, to assist them in presenting a proposition for such a program to the University.

Davey's constant companions on fishing trips were Wilbur Pell, Sr., then attorney for the State Board, who had assisted Davey in revising the Indiana Optometry Act in 1938, and Pell's brother-in-law, Professor Paul Harmon, chairman of the physiology department in Indiana University Medical School. The idea of establishing an optometry school generally monopolized the conversation on these trips; shortly after the agreement between Davey, Bixler, and Borish to present the

issue, Harmon arranged a meeting of the trio with Dr. Herman B. Wells, then President of the University, to begin a long series of negotiations on the feasibility and need for a reputable school of optometry in Indiana.

While receptive to the possibility, Dr. Wells requested that the group return to confer with him as the official representatives of the Indiana Optometric Association. Garnering this support took a period of time, involving heated and lengthy sessions with officers and members of the Association, and was finally completed by the support of the incoming president of the Association, Dr. Ed Cain, in a dramatic confrontation at the annual meeting in 1945. The committee was enlarged and made official, and met with Dr. Wells and Dr. Herman T. Briscoe, Vice-President and Dean of the Faculties, who was given the task of investigating optometric education to determine whether or not it was worthy of university inclusion.

This Dr. Briscoe accomplished by a coast to coast survey within the year.

Subsequently, the committee met with the Board of Trustees of the University, who, while basically in agreement that a need existed for an optometry school at Indiana University, refrained from finally implementing a decision until they received an opinion from the I.U. School of Medicine concerning the establishment of an optometry program. While the School of Medicine offered no formal objection to the program, it also steadfastly refrained from issuing an approval of the concept, with the result that negotiations with the Board of Trustees were stalemated for a number of years.

During that interval, Purdue University and Ball State University indicated favorable interest in starting an optometric program, but the early planners on the Optometric Committee held to the premise that the appropriate site was Indiana Uni-

versity, which alone of the state-supported institutions could provide a complete academic health center environment. Their foresight, which anticipated recent concepts of appropriate educational environment for optometry schools, was remarkable for those times, especially since progress in the Indiana University negotiations seemed so slow and uncertain of ultimate success. Nevertheless, they stood fast and refused an expeditious compromise.

During these years, members of the committee collectively and individually visited Briscoe regularly to discuss the prospects and possibilities. Davey and Borish became a familiar team on the campus, and upon the occasion of one of their visits which followed a fruitless all-afternoon session of the Optometry Committee with a Medical School Committee, Dean Briscoe suddenly suggested that the Optometric Association resort to the legislature. The suggestion was made at a time when the legislature was nearing completion of its biennial session, and the suddenly introduced bill was too late.

During the next two years a statewide Keyman program was introduced, the bill was prepared in great detail, and Dr. Virgil McCleary was elected President with the mandate to see the bill through the legislature. The bill was sponsored by Representative Forrest Link, Republican from La Porte, and Senator Earl A. Utterback, Democrat from Kokomo (and a patient of Dr. Borish's).

So thorough was the preparation and so devoted the effort conducted and led by Dr. McCleary, that the bill passed the legislature unanimously and the Senate with only three dissenting votes. The course of study at Indiana University, established by Bill No. 199, culminated the long awaited dream of many.

The bill also contained a provision, similar to one in the California legislation, which required all licensed optometrists to pay an additional registration fee of \$17.00 annually, to be deposited in a general fund designated to support the optometry program. In addition, a fund drive was immediately instituted by the Association and pledges of almost \$100,000 were collected.

The new law thereby clearly indicated the support of the legislature

and of optometrists, and the program has been spiraling upwards since.

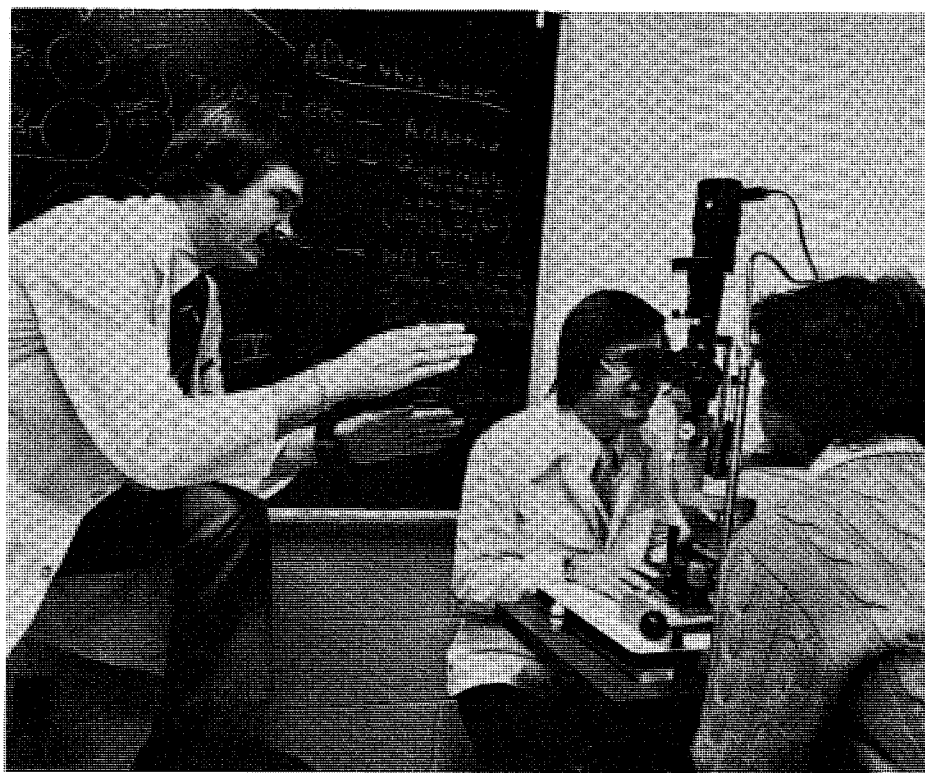
The Division of Optometry

Begun in 1952 under the direction of Dr. Henry W. Hofstetter, former Dean of the Los Angeles College of Optometry, the optometry program at Indiana University initially consisted of three years of professional studies following two years of required undergraduate preoptometry courses, and led to the Master of Optometry degree. In 1965, the professional curriculum was expanded to four years, culminating in the award of the Doctor of Optometry (O.D.) degree.

The academic unit created in 1952 to offer the new optometry

equivalent of a school. In most respects this was true, at least at first. The Director of the Division of Optometry, Dr. Hofstetter, reported directly to the Office of the President via Dean of Faculties, Dr. Briscoe, as did the Dean of the College of Arts and Sciences and the Deans of the Schools of Law, Business, Music, etc.

There were, however, some significant differences. For example, the annual budget of the Division of Optometry, after being set in conferences between Dr. Hofstetter and Dr. Briscoe was, just for convenience, processed through the office of the Dean of the College of Arts and Sciences, and subsequently monitored by that office. As



program was designated as the Division of Optometry. This was intended to be only a temporary arrangement until the program's enrollment and faculty grew large enough to benefit that of a professional school of the university, at which time it would promptly be changed to the School of Optometry. As it turned out, however, that "temporary" status was to last for 23 years!

With its eventual status in mind, the Division of Optometry was, from the outset, represented to the various state optometry boards, associations, and accrediting bodies, as the

another example, the Division of Optometry awarded no degrees; students admitted to the Division were simultaneously registered in the College of Arts and Sciences as candidates for the A.B. or B.S. in Optometry, and those degrees were awarded by the College on completion of the first two years of the optometry program offered by the Division. Entering their third year in the Division of Optometry, students were admitted to, and simultaneously registered in, the Graduate School which, on completion of that final year of the optometry program,

awarded the M.O. degree.

Later on, when the Optometry program was expanded to four years leading to the O.D. degree, this same arrangement continued, with students registered in the Graduate School for their final two years in the Division of Optometry. The O.D. degree, because it was awarded by the Graduate School, was treated as an academic degree rather than a professional degree, and was therefore the second highest degree awarded by Indiana University, ranking just below the Ph.D. degree!

It is small wonder that over a period of years in which there were numerous changes in the university's administrative offices and operating procedures, there were few who recalled the original reasons for the peculiar status and anomalous administrative procedures and working arrangements of the Division of Optometry. Instead, in efforts to "regularize" matters, the Division of Optometry gradually became relegated almost to the status of a small department of the College of Arts and Sciences. And because the Division offered none of the freshman and sophomore courses necessary for the numerical strength on which liberal arts budgets are typically based, the "department" gained few additional faculty or staff in spite of rapid increases in enrollment, and faced chronic shortages of funds for equipment and operating expenses. What had begun as a temporary but very satisfactory cooperative working arrangement between the Division of Optometry and the College of Arts and Sciences had outlived its usefulness and become a troublesome barrier to the development of the greatly expanded Optometry program.

Recognizing the growing need for the originally planned change to School status, Dr. Hofstetter, in the late 1960's, requested the President to appoint a special committee to study the matter. Due to numerous changes in the university administrative staff during that period, there were delays in appointing the committee and confusion over its purpose, with the result that the original request was misconstrued; the committee's report dealt inadequately with the issue of school status, and the matter was effectively tabled for several years.



The School of Optometry

It was not until 1974 that the change to School status was again actively pursued. Meanwhile, Dr. Hofstetter, after 18 years of service as Director of the Division of Optometry, resigned his position in June of 1970 to return to a faculty role of teaching, research, writing, and travel. Although he had given nearly two years advance notice of his intended resignation, his successor, Dr. Gordon G. Heath, was not appointed until a few days before Dr. Hofstetter's departure.

Dr. Heath encountered many of the problems previously noted by Dr. Hofstetter regarding budget, faculty, curriculum, degrees, etc., but continued for a time to work out suitable operating arrangements with the College, the Graduate School, and the campus administration. 1972 and 1973 were not propitious times to seek major changes because of extremely austere budgets appropriated by the legislature, and the creation of a new Indiana Higher Education Commission which was to oversee all programs of state-supported institutions. In 1974, however, a proposal was completed and submitted to Indiana University President John W. Ryan, requesting that the Division of Optometry be changed to a School of Optometry, with administrative organizational status and authority appropriate to a professional school.

In 1975 the proposal was approved by the Faculty Council, the Board of Trustees, and the Indiana

Higher Education Commission. The change became effective August 1, 1975, at which time Dr. Heath was appointed as the first Dean of the School of Optometry.

Now, students graduating from the four-year professional program of the School of Optometry still receive the O.D. degree, but because it is awarded by the School of Optometry rather than by the Graduate School, it is appropriately regarded as a professional degree. Students admitted to the School of Optometry without a baccalaureate degree may complete the requirements for a B.S. or A.B. degree in their original major by simultaneously registering in the College of Arts and Sciences if they wish, or may choose to receive a B.S. in Optometry degree at the conclusion of the second year in the School of Optometry.

The change to School status did not immediately solve all the problems of budget, personnel, etc.; indeed, the added administrative duties and responsibilities provided many new problems, but ones that appear much more amenable to solution than those of the past. Already, there have been increases in personnel and budget that have permitted some long-awaited improvements, and many others are planned for the next few years.

School of Optometry Facilities and Programs

The Division of Optometry was once scattered throughout the Bloomington campus in eleven different buildings, until the construction of its own six-story, limestone-faced building in 1968.

Despite the many changes in the school's programs and class sizes since 1968 that have taxed the capacity of the Optometry Building, it continues to serve its purposes well. Some of the pressure has been relieved by establishing several clinics and clinical programs outside the building, even outside of Bloomington and outside of Indiana. The External Clinic Program includes six-week clinical rotations in three major optometric centers, an Army eye clinic, and a Veterans Administration Hospital, all in other states.

The school has also developed a county-wide nursing home visitation program, a glaucoma screening program utilizing an equipped mobile van, and a school screening pro-

Indiana University staff aided in the research for this article.

gram, staffed by student teams who visit major school systems throughout the state.

The School of Optometry today admits 69 students per class to the four-year optometry degree program, out of the 700 or more students that apply each year. Students entering the optometry program receive heavy emphasis on fundamental visual sciences during their first two years of study, followed by clinical and socio-optometric studies in the final two years.

The second-year optometry curriculum includes heavy emphasis on clinical techniques instruction. Students are expected to demonstrate proficiency in basic exam procedures by the end of the first semester. By the end of the year, the student must meet standards of minimum competence in examination procedures, dispensing, and ocular pathology, in preparation for the clinical training of the next two years.

The last two years center around the examination and care of patients. During this time, students are

initially assigned to duty in the Optometry Clinic on the Bloomington campus. In their final year, besides training in the main Optometry Clinic and in two other clinics in Bloomington, students also serve in the external clinical rotations mentioned above.

In addition to the Optometry Program, a new Optometric Technician program to provide students with the information, technical skills and training to assist optometrists, was established in 1971. The two-year program resulted in another 30 students per class, straining the original capacity of the Optometry Building.

At this time, the School of Optometry consists of about 350 individuals, including approximately 15 graduate students enrolled in the Physiological Optics Program, intending to pursue teaching and research careers in the field of visual sciences. The faculty of the Physiological Optics program presently includes members from the optometry, anatomy and physiology, neural sciences, and psychology faculties.

Latest Developments at Indiana University

The Indiana Rehabilitation Services Board has recently awarded I.U.'s School of Optometry a project grant to establish an out-patient clinic for the visually handicapped, partially sighted, and legally blind persons in the state of Indiana.

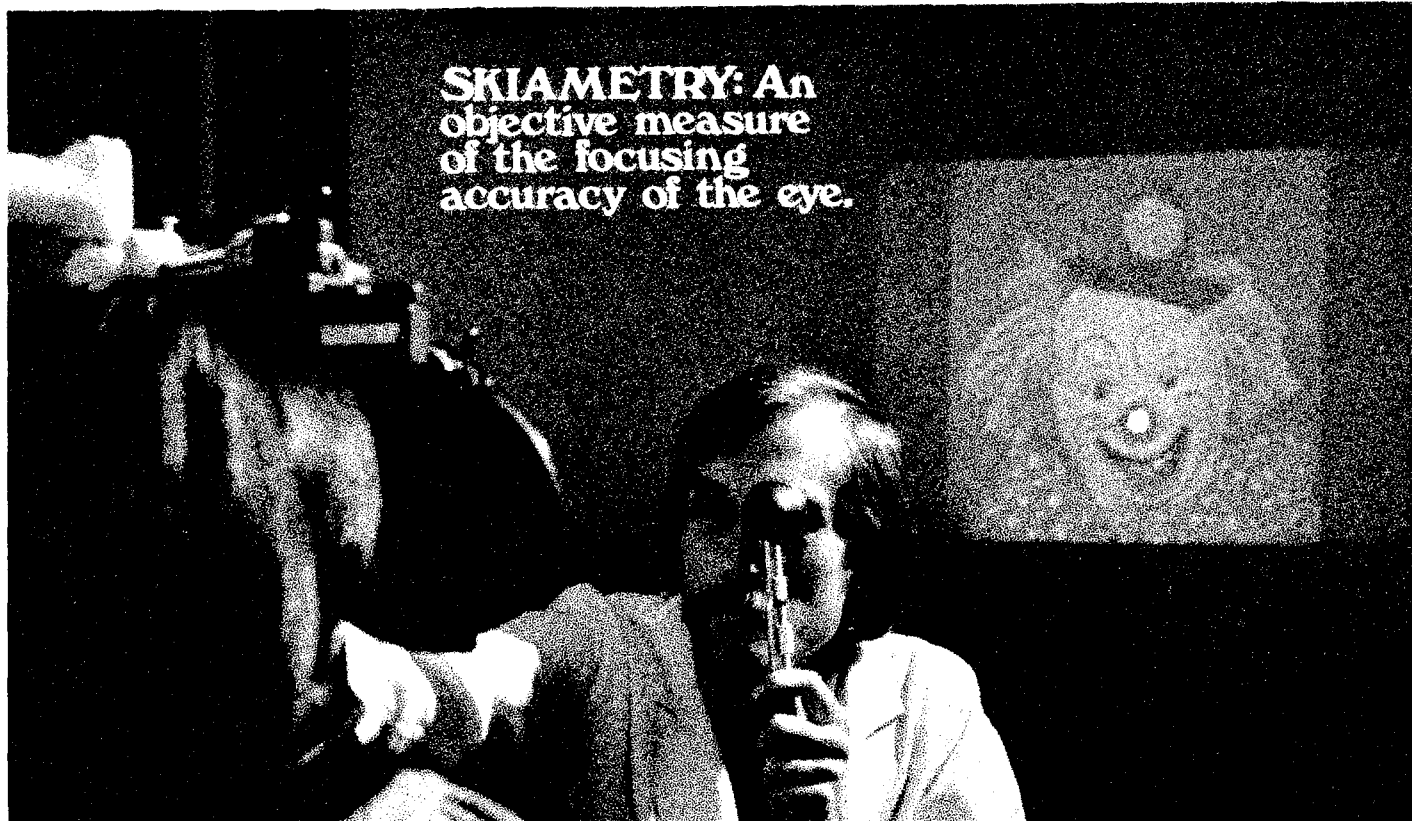
The function of this clinic, located in Indianapolis, is to provide vision screenings and examinations to aid patients with visual disabilities, and to diagnose and treat all visual ailments. Rehabilitative care is available to patients requiring special training and instruction in the use of special aids.

The clinic is staffed by student interns, optometric technician trainees, and optometric technicians. All staffers are under the direct supervision of clinical and faculty members of the School of Optometry.

The continued, rapid growth of such programs at I.U. indicate a promising future for one of the top optometric schools in the country.



**SKIAMETRY: An
objective measure
of the focusing
accuracy of the eye.**



JOE: A Reflective Medium Focusing On Optometric Education.

The Journal of Optometric Education (JOE) is the new quarterly publication of the Association of Schools and Colleges of Optometry. Representing the optometric education segment of the profession, this attractive magazine focuses on a wide range of topics on significant aspects of your profession. Highly praised for its visual appeal and innovative design, JOE aims at keeping the optometric profession—students, faculty, academic administrators and practitioners—up-to-date on a myriad of important topics like the growing costs of educating an optometry student today, the development of the Optometry Colleges Admission Test (OCAT); the impact of affirmative action guidelines on optometry schools; the relationship between PSRO's and continuing education, and optometry's expanding role in the Veterans Administration. In addition to professional papers, JOE publishes special features, such as book reviews, ASCO news and profiles of optometric institutions around the country.

Sound interesting? Then join the growing ranks of professionals who are subscribing to JOE. A subscription to JOE is not only a show of support for professional education, but a way of furthering your own education now that you are out of school.

Send to: Journal of Optometric Education
1730 M Street, N.W. Suite 411
Washington, D.C. 20036

4 issues/year - \$10.00

Foreign subscription - \$15.00

Make checks payable to ASCO

Name _____

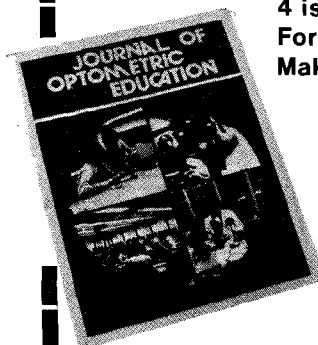
Address _____

Zip _____

Private Practice _____

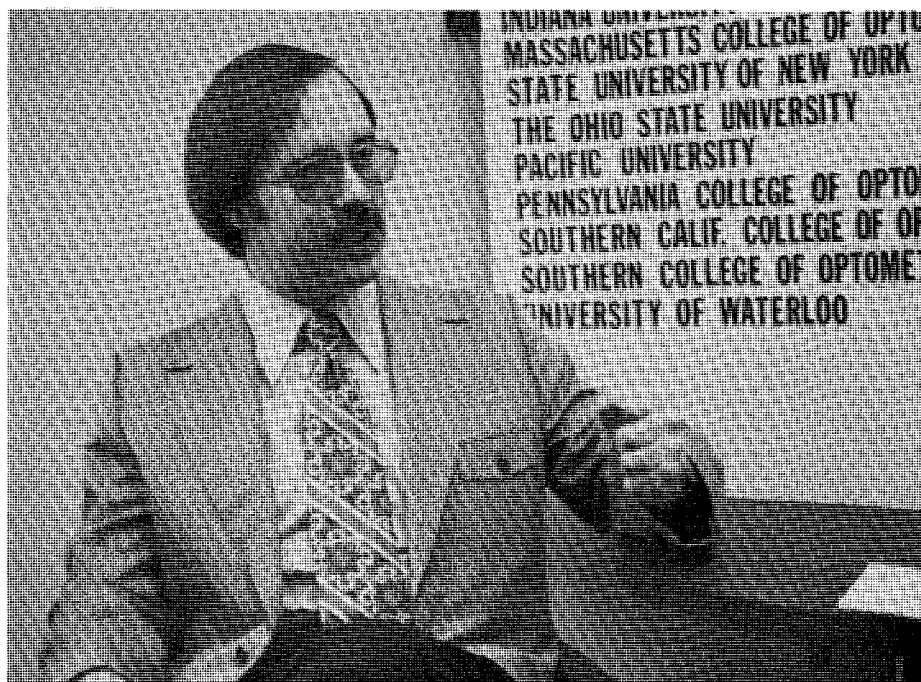
Institution _____

Other _____



The New Health Professions Law and Optometric Education

An Exclusive Interview With David Lewis



On October 12, 1976, President Ford signed into law H.R. 5546, a measure making a number of significant revisions in federal assistance to health professional institutions and students. The AOA Washington Office, in collaboration with the ASCO leadership, expended considerable time in helping to shape this legislation. Now known as the Health Professions Educational Assistance Act of 1976 (HPEA), Public Law 94-484 contains good news for present and future optometry schools and students.

Under P.L. 94-484, the production of medical specialists is somewhat curtailed; new sources of money are made available for opening new optometric schools and clinical facilities; a broad list of special projects may be used to further expand the scope and depth of optometric education; and optometric students will be eligible for greater financial assistance. The achievement of each of these opportunities will depend upon the imagination and perseverance of the several schools and ASCO.

A number of questions have arisen as to the implications and effect of P.L. 94-484. In order to provide optometry faculty and administrators with insights into this new legislation, ASCO arranged for an exclusive interview with Mr. David Lewis, Director of the National Health Division in the AOA's Washington Office.

ASCO: How will this legislation help produce additional primary care providers and fewer specialists?

LEWIS: The Congress makes its intentions clear in finding that "there is no longer an insufficient number of physicians and surgeons in the United States" but that there are "inadequate numbers of physicians engaged in the delivery of primary care" (here defined as family practice, general internal medicine, and general pediatrics).

Then it proceeds to encourage new medical, osteopathic and dental school (designated as MOD) construction to be oriented around primary care; to mandate medical school residency training programs collectively to have at least 50% of their first year positions earmarked for primary care by 1976-80 in order to maintain capitation eligibility; and to assign priority to MOD start-up projects which feature primary care.

While it may be true that optometrists

are not specified in the above definition of primary care, the overall thrust of the law is very clearly to recognize the primary care responsibilities of professions such as optometry. An example is one special project which many are already terming the "optometric primary care special improvement grant."

A related example is the fact that the law should prompt a gradual decline in the production of such medical specialists as ophthalmologists. The net effect should be greater official attention to the primary care role of optometry, plus increased official impetus toward a clearer delineation of the relative roles of optometry and ophthalmology on the part of Health Systems Agencies (recently created state and local health planning bodies).

ASCO: How does P.L. 94-484 assist in the establishment or expansion of optometric schools?

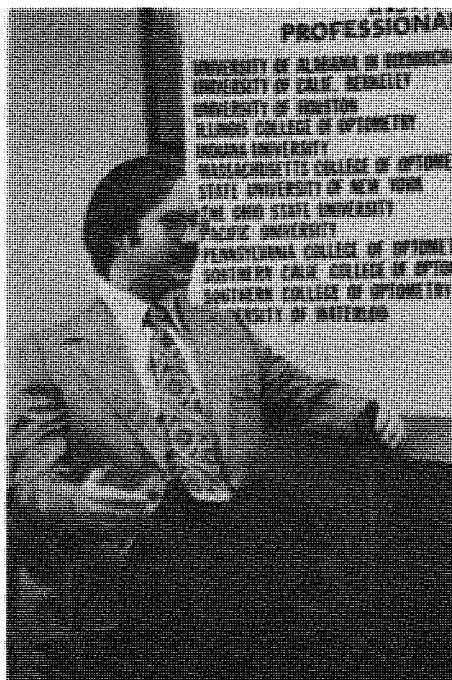
LEWIS: In three ways. First, starting with FY 1978 (October 1, 1977 to Sep-

tember 30, 1978) optometry becomes eligible for start-up assistance. HEW may provide funds to "assist in the planning, development, expansion, or initial operation of a regional (optometry) school." This new authority will be particularly important in initiating the new regional schools contemplated in several areas. Second, schools of optometry remain eligible for construction assistance. Third, an optometry school with a regional program may, during FY 1977 only, apply for funds to expand its clinical facilities.

ASCO: What about federal institutional support based on total school enrollment (capitation)?

LEWIS: In order to qualify for capitation of \$765 per student—assuming that appropriations are made at this level and not at a lower amount—an optometry school must:

1. Have a first-year student enroll-



ment not less than in the preceding academic year.

2. Spend at least the same amount of non-federal funds (other than for construction) as during the preceding fiscal year.

3. (a) If the first-year class was 100 or less, increase it by 5%; or if it was over 100, increase it by $2\frac{1}{2}$ or 5 students, whichever is greater; or (b) admit at least 25% (public schools) or 50% (private schools) of its first year students from states which do not have accredited schools of optometry.

ASCO: Isn't this capitation figure actually a decrease?

LEWIS: On the surface, this is true. Previous law had authorized \$800 for optometric capitation. However, actual appropriations invariably have been somewhat below both the \$800 and \$765 figures.

It is more important, though, to look beyond capitation and to examine additional sources of money that the new law has created for optometric schools. For example, new schools of optometry for the first time are made eligible for start-up assistance, and a broad array of special projects is provided for.

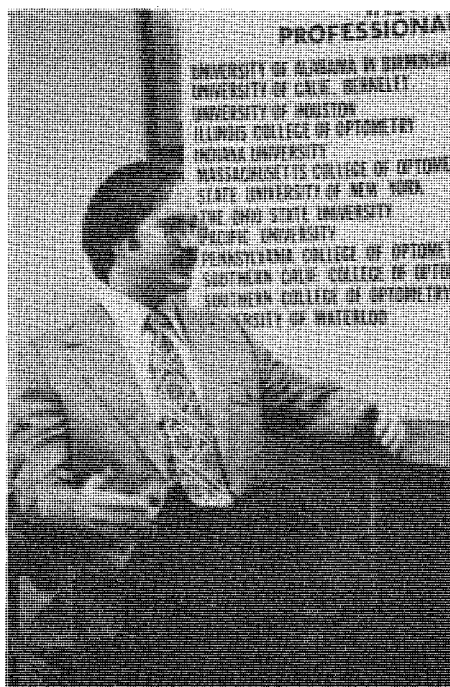
ASCO: What types of special project grants will be available to optometry schools?

LEWIS: Schools of optometry will be eligible for grants for developing programs for cooperative interdisciplinary training with other health professional schools, emphasizing the use of the team approach to the delivery of health services or training in the organization,

management, and effective utilization of assisting personnel.

Schools of optometry will also be eligible for the following special project grants:

- 1.** Establishing humanism in health care centers.
- 2.** Bilingual health clinical training centers.
- 3.** Curriculum development.
- 4.** Health manpower development.
- 5.** Environmental health education and preventive medicine.
- 6.** Development of expansion of regional health professions schools.
- 7.** Psychology training programs.
- 8.** Regional systems of continuing education.
- 9.** Computer technology.
- 10.** Training of PSRO staff.



11. Training of health professionals in human nutrition and its application to health.

12. Training in the diagnosis, treatment, and prevention of the diseases and related medical and behavioral problems of the aged.

ASCO: Will there be special project grants available for optometry schools in addition to the above list?

LEWIS: Yes, definitely. The conference report and floor remarks by Representative Tim Lee Carter (R-KY) emphasize that the above list is mentioned "only briefly as examples of projects which may be funded under broad, general authority" and that it is intended that projects also be considered from the more extensive list which was con-

tained in the Senate version of the bill, i.e.:

1. To plan, develop, and operate residency training programs in special optometric services or in meeting the optometric needs of special populations.

2. To plan, develop, and operate educational programs which provide training in the early detection and diagnosis of health problems which are accompanied by visual or ocular systems (primary care special improvement grant).

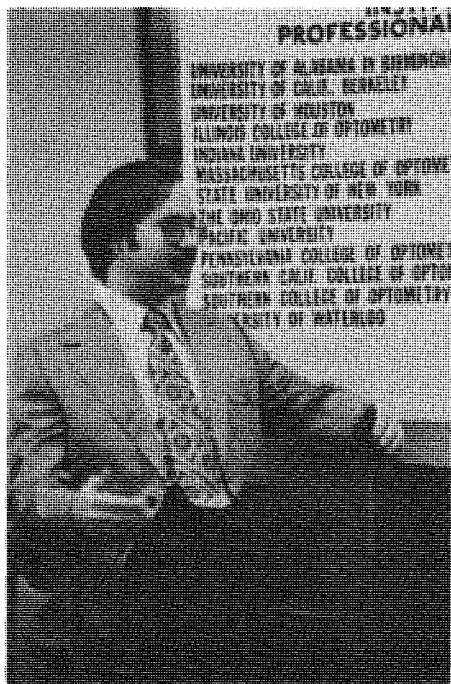
3. To provide for increased emphasis on, and training (including continuing education) in, clinical pharmacy, clinical pharmacology, pharmacokinetics, and drug information and counseling.

4. To assist in the development or operation of programs for health manpower planning, including cooperative programs among health and education planning bodies, in order that appropriate resource allocations can be made for health manpower education programs.

5. To establish and operate programs designed to provide increased emphasis on, and training in, rehabilitation medicine and encourage greater knowledge of and sensitivity toward the special health problems of handicapped individuals.

6. To establish and expand programs, including continuing education programs, to increase the competencies of health profession personnel in areas of prevention.

7. To provide traineeships (including costs of training, fees, stipends, travel and subsistence expenses and dependency allowances) for full-time students



Photos by Roger Kranz

to secure part of their education under a preceptor in primary health care or in any field of health care when such training takes place in a health manpower shortage area.

Even beyond this list, optometric institutions may apply for grants under such new or expanded programs as P.L. 94-317, the Consumer Health Information Act. This 1976 legislation should provide an opportunity for HEW-sponsored research in health information, health promotion, preventive care and education in the appropriate use of health care. An AOA project team is developing recommendations for such P.L. 94-317 aspects as specialized training for health professionals and paraprofessionals.

Schools of optometry remain eligible for grants for meeting operational costs, meeting accreditation requirements, or carrying out appropriate operational, managerial, and financial reforms.

ASCO: Is it true there has been a major change in student loan forgiveness provisions?

LEWIS: Yes. The health professions loan repayment provision is modified to apply only to direct health professions loans. Students who elect to practice in shortage areas may obtain repayment of up to 85 percent of loans at the rate of 60 percent for the first two years, the minimum service period, and 25 percent for the third year. Non-federal educational loans may no longer be repaid under this program.

It is unfortunate and unfair that HEW is interpreting this modification so as to prevent those non-federal loans which were incurred prior to enactment of this law from being eligible for forgiveness. HEW's decision is now being studied for constitutional implications and with a view toward congressional or judicial remedy.

On the positive side, the availability of funds under a new program providing federally-insured loans for students should serve as a partial countermeasure.

ASCO: What other changes were made in scholarship and loan provisions that will assist optometry students?

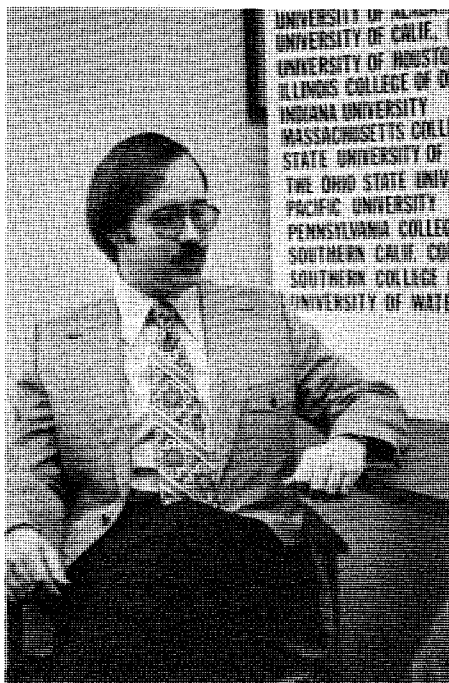
LEWIS: These changes are:

1. The current prohibition against receiving both a health professions student loan and a national defense education loan is repealed.

2. A new program is set up to provide federally-insured loans for students, including optometry students, who may borrow up to \$10,000 a year with a total loan limit of \$50,000. Loans may be

paid back directly (within 15 years at no more than 10% interest) or by National Health Service Corps service.

Optometry students remain eligible for federally-assisted school-administered loan funds. Also, funds are authorized to be given to first year students who are of exceptional financial need.



ASCO: what changes effecting optometry have been made in the National Health Service Corps scholarship program?

LEWIS: Two changes in particular should increase the participation of optometrists in the NHSC. First, eligibility

for this program designed to place health professionals in underserved areas, has been expanded so as to encompass students from needed disciplines in addition to medicine, osteopathy, and dentistry. Ten percent of NHSC scholarship appropriations are to be earmarked for students rather than MOD.

Second, the law has revised the definition of shortage areas and has directed HEW to establish criteria for the designation of these areas. AOA is now working with HEW on this matter, and expects that some meaningful change will be made in the current shortage definition of one OD to 15,000 persons. An improvement in this definition will open up more slots for ODs, which in turn will mean more NHSC scholarship money for optometric students.

ASCO: Isn't there some additional work in progress that could effect the definition of shortage areas?

LEWIS: Yes, and the work in question will also underscore the need for additional ODs and optometric schools. HEW is to collect, compile, and analyze data on health professions personnel, including data respecting their training, licensure status, place of practice, specialty, practice characteristics, and socioeconomic background. Thus, HEW will fund projects such as the Optometric Manpower Resources Project, whose data has already pinpointed specific needs for ODs as well as demonstrated an upcoming national shortage of optometrists.

ASCO: At what levels have these various programs been authorized?

Program	Authorized (millions of dollars)			
	FY '77	FY '78	FY '79	FY '80
Optometric capitation (FY '77 figures include all VOPP schools)	29.3	3.2	3.3	3.3
Construction (includes interest subsidies)	127.0	42.0	43.3	43.3
Health Admin. Grants	—	3.2	3.5	3.8
Allied Health	30.8	27.5	30.0	32.5
Start-up/financial distress/ interdisciplinary training/ other special projects	66.3	25.0	25.0	25.0
Student loans	39.1	26.0	27.0	28.0
Financially needy scholarships	—	16.0	17.0	18.0
NHSC Scholarships	40.0	75.0	140.0	200.0

Southern College of Optometry
1245 Madison Avenue, Memphis, TN 38104
Public Notice

No person shall, on the basis of race, color, creed, religion, sex, age, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity at Southern College of Optometry. The College is an Equal Opportunity/Affirmative Action Employer.

Southern California College of Optometry announces the addition of clinical faculty positions. Applicants should possess a strong commitment to teaching, research, and patient care. Optometrists with advanced training and/or degrees, especially in the areas of public health, vision therapy, disease detection and contact lenses, are encouraged to apply.

Application forms may be requested by writing Dr. Douglas Poorman, Dean of Academic Affairs, Southern California College of Optometry, 2001 Associated Road, Fullerton, California 92631.

An Equal Opportunity Employer

Optometric Administration: We have a position-vacancy in a new administrative post as Director of the Division of Primary Care Optometry.

As head of one of four academic divisions, the Director will have primary administrative responsibility for curriculum, instructional programs and clinical training protocol for those aspects of optometric education that are directed toward general optometric practice. Responsibility for Clinical Progress will be shared with a non-Optometrist Clinic Administrator.

The Applicant should have had experience in the general practice of Optometry and optometric education, and in Clinic Administrator.

Familiarity with optometric curricula and with the principles of health proffs. education are desirable, as is a graduate degree in Physiological Optics, or in one of the Basic Visual or Health Sciences.

Faculty rank and salary are commensurate with qualifications and experience. Apply with Curriculum Vitae and references to: Jerome Rosner, O.D., Chairman, Search Committee for Division Directors, New England College of Optometry, 424 Beacon Street, Boston, Massachusetts 02115.

An Equal Opportunity Employer

Optometry Faculty: The College of Optometry at Ferris State College has positions available for a faculty member to teach and develop curriculum in the area of general and ocular pathology and for a clinic director to develop and administer the College's teaching clinics. Applicants for the pathology position should have appropriate professional degrees with teaching experience in pathology. Applicants for the Clinic Director position should have an O.D. degree with administrative and clinical education experience. Rank and salary are commensurate with qualifications and experience.

Apply with curriculum vitae to: Dr. Jack W. Bennett, Dean, College of Optometry, Ferris State College, Big Rapids, MI 49307.

An Equal Opportunity Employer

Optometric Technician Program Faculty: The Optometric Technician Program at Ferris State College has positions available for a clinic director and an optometric technician. The clinic director will modify clinical curriculum, manage the clinic, and be involved in patient care; and should have an O.D. degree, teaching, clinical and administrative experience. The optometric technician will have clinical and classroom teaching responsibilities and should have an Optometric Technician Degree and a minimum of two years practice and/or teaching experience. Rank and salary are commensurate with qualifications and experience.

Apply with curriculum vitae: F.M. Nista, O.D., Co-ordinator, Optometric Technician Program, Ferris State College, Big Rapids, MI 49307.

An Equal Opportunity Employer

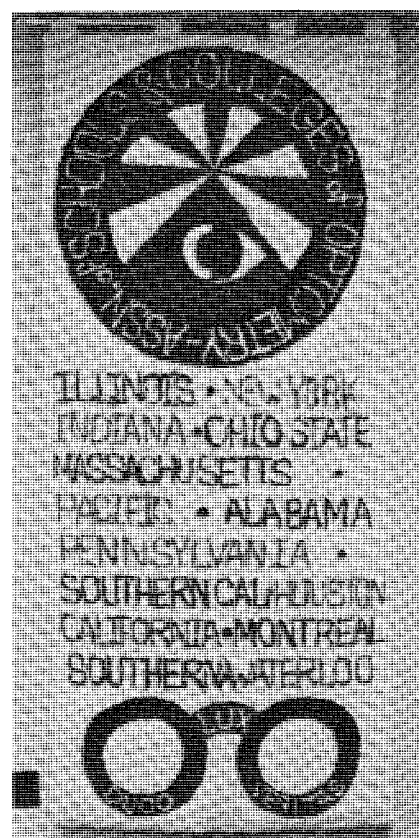
ASSOCIATION of SCHOOLS and COLLEGES of OPTOMETRY

The Association of Schools and Colleges of Optometry (ASCO) represents the professional programs of optometric education in the United States and Canada. ASCO is a non-profit, tax-exempt professional educational association with national headquarters in Washington, D.C.

BOARD OF DIRECTORS

Dr. Alfred A. Rosenbloom,
President
Illinois College of Optometry
Chicago, Illinois
Dr. Gordon G. Heath, Acting
Dean, Indiana University
School of Optometry
Bloomington, Indiana
Dr. Richard L. Hopping,
President
Southern California College
of Optometry
Fullerton, California
Dr. William R. Baldwin,
President
Massachusetts College of
Optometry
Boston, Massachusetts
Dr. Willard Bleything, Dean
Pacific University
College of Optometry
Forest Grove, Oregon

Dr. Norman E. Wallis, President
Pennsylvania College of
Optometry
Philadelphia, Pennsylvania
Dr. Spurgeon B. Eure, President
Southern College of Optometry
Memphis, Tennessee
Dr. Alden N. Haffner, Dean
State University of New York
College of Optometry
New York, New York
Dr. Frederick W. Hebbard, Dean
Ohio State University
College of Optometry
Columbus, Ohio
Dr. Henry B. Peters, Dean
University of Alabama
School of Optometry
Birmingham, Alabama
Dr. Monroe J. Hirsch, Dean
University of California
School of Optometry
Berkeley, California
Dr. Chester H. Pheiffer, Dean
University of Houston
College of Optometry
Houston, Texas
Dr. Merrill E. Woodruff, Director
University of Waterloo
School of Optometry
Waterloo, Ontario, Canada



Editorial Council, *Journal of Optometric Education*

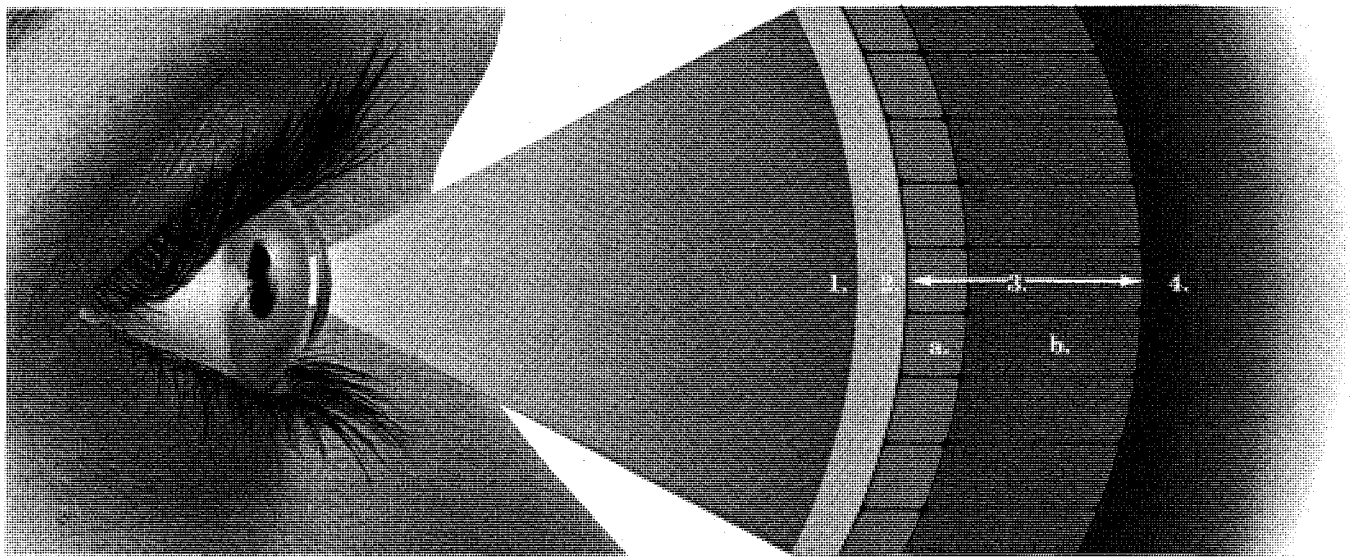
Chester H. Pheiffer, O.D., Ph.D., *Chairman*
University of Houston's College of Optometry
Irvin M. Borish, O.D., LL.D.
School of Optometry
Indiana University
Frank Brazelton, O.D.
Southern California College of Optometry
Vonne Porter, Ph.D.
Southern College of Optometry
Norman E. Wallis, Ph.D., O.D. (ex officio)
Pennsylvania College of Optometry

President
Norman E. Wallis, Ph.D., O.D.
President, Pennsylvania
College of Optometry

Vice-President
Alden N. Haffner, O.D. Ph.D.
Dean, State University of
New York, College of
Optometry

Secretary-Treasurer
Frederick W. Hebbard, O.D., Ph.D.
Dean, Ohio State University
College of Optometry

LIQUIFILM[®] WETTING SOLUTION DOES MORE FOR YOUR CONTACT LENS PATIENTS.



1. Cornea 2. Tear film 3. Liquifilm Wetting Solution a. Hydrophilic groups b. Lipophilic groups 4. PMMA lens

WHY LIQUIFILM? A unique plastic polymer, Liquifilm (polyvinyl alcohol) has outstanding lubricating, wetting, and adhesive properties. It forms a tenacious, protective film that resists wash-off, does not blur vision, and does not interfere with healing of injured corneal epithelium. These characteristics have made Liquifilm one of the most widely used vehicles for ocular medications and artificial tears.

CONDITIONS THE LENS. The polyvinyl alcohol molecule has both lipophilic and hydrophilic properties that permit complete and long-lasting wetting of the hydrophobic lens surface. While the lipophilic groups (b) bond themselves to the lens surface (4), the hydrophilic groups (a) position themselves so they are exposed to the aqueous ocular environment (2).

CUSHIONS THE LENS. The altered lens surface is now compatible with the natural tears, allowing them to flow freely over and around the lens. Thus, a continuous buffer zone is maintained at two critical comfort areas. Between the palpebral conjunctiva of the upper lid and the lens. Between the cornea and the lens.

BUT THAT'S JUST THE START. Liquifilm Wetting Solution is formulated to meet the needs of the eye as well as the contact lens. Isotonic so the delicate osmotic balance of corneal cells is not disturbed. A pH of 7.0 so it can adjust quickly and comfortably to the ocular environment. Microfiltered to remove any potentially irritating particles. And finally, 180 quality control inspections ensure the sterility and quality of Liquifilm Wetting Solution.

**LIQUIFILM[®]
WETTING SOLUTION**
LUBRICATES, PROTECTS, CONDITIONS,
CUSHIONS, AND COMFORTS.

ALLERGAN Pharmaceuticals
Irvine, California, U.S.A. / Pointe Claire, P.Q., Canada

© 1976 Allergan Pharmaceuticals

ASSOCIATION OF SCHOOLS
AND COLLEGES OF OPTOMETRY
1730 M Street, N.W., Suite 411
Washington, D.C. 20036

Non-Profit Org.
U.S. POSTAGE PAID
at Wash., D.C.
Permit No. 46070