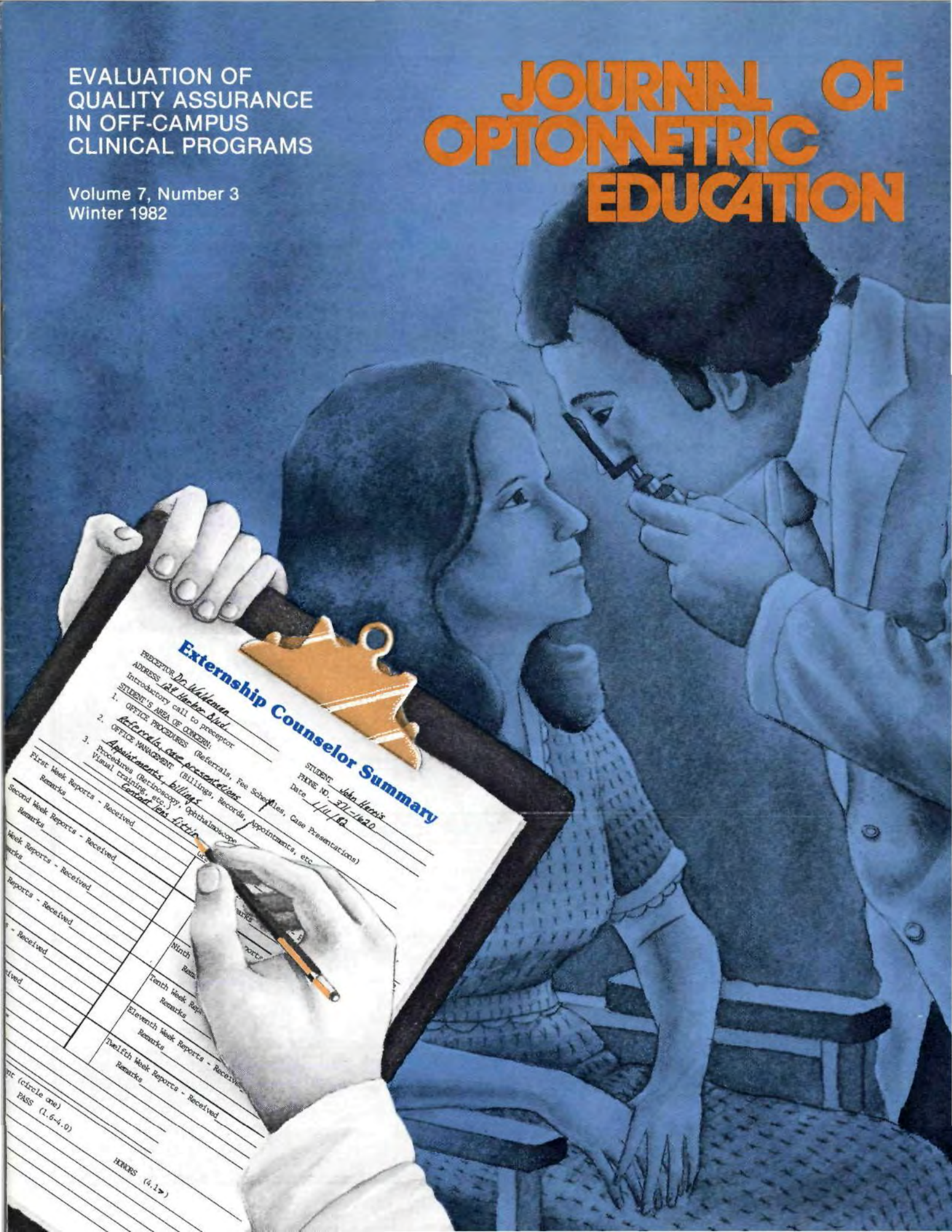
# JOURNAL OF OPTOMETRIC EDUCATION

## EVALUATION OF QUALITY ASSURANCE IN OFF-CAMPUS CLINICAL PROGRAMS

Volume 7, Number 3
Winter 1982



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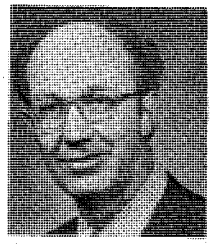

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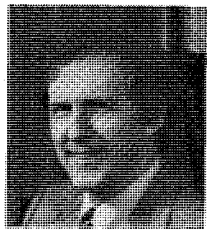

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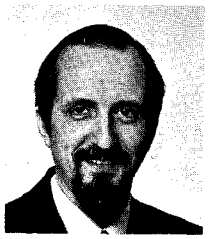

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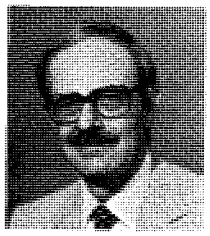

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## DEPARTMENTS



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# Clinical Training via External or Adjunct Assignments

The fall, 1981, issue of the *Journal of Optometric Education* dealt mainly with the papers and panel discussion concerned with the problem of assessing or evaluating a student's clinical skills as demonstrated within the teaching facilities of the optometric educational institution. This discussion was partner to another delivery and discussion conducted at the same meeting which dealt with the increasing development of external or extension clinical facilities, and the operation, evaluation and pertinence of training within such facilities. This issue of the *Journal* focuses on that discussion.

As each institution reported the nature and detail of operation of these "external clinics," it became apparent that each could be placed in one of three categories: first were clinics operated by the school or college of optometry (sometimes in conjunction with another college in which technicianry programs were held) but located away from the home campus of the optometric institution; second were facilities which were located in hospitals (chiefly veterans' hospitals) or clinics which were not actually controlled or operated by the school or college of optometry but in which visual examination facilities or ophthalmology programs existed; and third were arrangements with private practitioners in which students were assigned to the practitioner's office for a given period.

Probably the initial impetus for the inauguration of each or all of these systems was simply that the institution had too many students or too few patients (or variety of patient types) for the resident campus clinic to train respectably. However, certain other factors have become recognized as pertinent to these forms of programs.

It is obvious that the first form, the structuring of a branch clinic at an off-campus location, appears simplistically to merely present the same problems of both teaching and assessment which training at the main clinic has; since the faculty consists of the same type of personnel performing in the main clinic, and equipment, procedures, and policies are also likely to be the same. However, the location of the facility may make a decided difference for many institutions in diversifying the nature and type of patient load served. This may be particularly true where the school of optometry is part of a large resident campus wherein the tendency can be that fellow university students or faculty comprise a major portion of the patient load. Location of branch clinics in totally contrasting socioeconomic locales and rotation of students through such clinics serve not only the obvious purpose of accustoming students to the interactions of the "real" world, but also to ophthalmic and ocular conditions possibly not prevalent in the home atmosphere. The call for a different patient interaction as well as exposure to more unique conditions tends to make such extensions of the clinic instructionally more valuable than if the student were exposed to the same total of patients at the main clinic alone. This category may be considered an advantageous adjunct, for these reasons, to the clinical teaching programs.

The second category, assignment of students to clinics or facilities in veterans' hospitals or multipractice centers, suffers from some pedagogical diminutions but also has some decided advantages. The negative factors stem from the fact that despite assignment of an optometric resident as an adjunct faculty member of the school of optometry, true instructional supervision may be difficult to provide. Even supervision and administration of the program, if the hospital is at a major distance from the optometry school, require careful attention and devotion by some member of the faculty assigned to the task. The resident may be an excellent clinician but has not been selected for that position along qualifying lines attributable to faculty selection and may have little knowledge of or concern for teaching or research. The hospital, too, ordinarily can entertain scarcely more than one or two students, and equivalency of opportunity from one hospital to another for the student body is practically impossible. All the disadvantages discussed in the fall issue of the *Journal* regarding appropriate assessment may tend to be even more emphasized.

However, such institutions often provide the student with a highly significant patient population, especially in the areas of primary care and low vision, and with excellent opportunity for development of skills in these areas, follow-up procedures, diagnostic roles, and interprofessional embellishments. Students returning from such exposures tend to be far more advanced in dealing with the primary care elements of practice than those who have not been so exposed. Overall, given that such an exposure does involve true interprofessional involvement and does not confine the student to the most conscribed optometrical service, the advantages seem to far outweigh the potential problems of indefinite supervision and assessment which may accompany this exposure.

As a practitioner of almost four decades, it is this writer's opinion that the third system—that of assigning a student to the office of a private practitioner—raises the most questions. While the most advanced equipment may be reasonably expected in the institutional environments noted above, such cannot always be assumed in even a highly successful practitioner's office. An alarmingly large number of well established practitioners make few changes and only limited additions to their basic equipment—which is often of an era representing that in which they started their practices. Secondly, even when added equipment is present, it is frequently of a type which either tends to facilitate passage of more patients within a given time frame or to elicit notoriety and publicity which might help increase the practice rather than to be selected for additional diagnostic significance. For example, far more practitioners are ready to purchase automatic refractors which are promoted for both the above advantages than fundus cameras which might add to patient benefit.

Also, only the unusual practitioners continue to expand their own skills and scope so that new instrumentation becomes routine—for example, the routine use of binocular indirect ophthalmoscopy has not become standard, even in those states where pharmaceutical laws favor its use. Consequently, the student often is familiarized with routine procedures during his institutional clinical exposure which are not necessarily present in the office to which he is assigned or, if present, are not necessarily used consistently. Further, it is difficult for the practitioner to assign a patient whose good will might influence his entire future practice to a student not yet graduated from school, even if the practitioner stands by and supervises. Such would require unusual dedication, not to mention the time utilized. (One can imagine a practitioner turning the mayor's wife over to a student for an examination, for example.) Often, the student's experience may be mainly that of adjunct service whether associated with preliminary testing, adjustments, etc.

This does not deny the possibility that dedicated practitioners may truly make attempts to fulfill whatever obligation they have accepted to the school. It merely poses the likelihood that the result will conform to what Brazelton[1] said in regard to adequate assessment: "Having the student clinician observe, work with and meet the exacting standards of a model practitioner might constitute an acceptable way of establishing competence except for two things. First, a successful practitioner has very little time to do this and still conduct a busy practice simultaneously. Second, rampaging specialization has put a full spectrum of optometric practice beyond the scope of a single practitioner." Note the second objection, that the broad range of exposure which a student should expect from his clinical training to which he can be exposed within an institution's own clinics can scarcely be provided in even a very busy private practice. Most practitioners see only limited numbers of the diversity of conditions which exposure to various clinical settings can provide; in fact, in truth, most successful practices consist of a majority of simple refractive and presbyopic problems just as most general physicians find themselves giving shots the majority of the time. Also, (and this may be true to a great extent for the previous situations) the likelihood of practitioners, untrained pedagogically, evaluating students by any common standards is highly improbable and possibly unfair to the class rankings involved.

The favorable aspects of this system center around the fact that the student gets an excellent opportunity to observe and learn the actual operations of a successful office, that is, the best possible training in at least one system of practice management. That such exposure has most valuable educational merit is certainly not denied. The problem is whether this outweighs the possible disadvantages which could arise in the student's basic training in technique, diagnostic evaluation, and diversity of patient exposure. In the writer's judgment, these latter are more important at the undergraduate stage of the student's career than the gain represented by the management aspects. It is easy to understand that a student would gain mightily by such an exposure during the last weeks of his or her senior year after experiencing fairly thorough technical training. But what of the student who receives such exposure early in the last year when graduation is still what appears to be a long way off and is then followed by heavy technical concentration under entirely different circumstances?

To make this system even reasonably effective and equitable requires enormous concentration by the faculty of the school utilizing such a method. Elaborate systems of determining eligible practitioners from the standpoint of practice, manner and equipment become necessary. Follow-up evaluations in great detail must be pursued to be sure that the students genuinely are given adequate opportunity, and these must be provided by the involved students themselves as well. (It is ponderable as to how objectively a student will report a portion of assigned training for which he needs to receive a satisfactory grade in order to qualify for graduation.) That such an extensive system of evaluation and review can be done has been evidenced, but whether the advantages gained by it are worth the effort and endeavor could be challenged.

It is interesting to note that such a system was used widely in Great Britain for many years. Students spent three years in an academic environment and the fourth in a private practitioner's office. Recently, the educational system has turned away from the use of private practices and has inaugurated controlled institutionalized settings for this fourth year. Similarly, podiatry has sought to gain the apprenticeship virtues and management aspects provided by such a system, but has wisely deemed such an exposure necessary after graduation and requires every podiatric graduate to spend such an apprenticeship before receiving a license to practice.

This last method appears to be the one most fraught with possible inadequacy since it requires not only that a large number of dedicated, selfless and also successful practitioners be exceedingly well equipped, willing to modify their accustomed procedures and risk offending some of their clientele for the benefit of a student, but also that they exhibit teaching ability and evaluation skills. It requires tremendous application by the host institution in selection, follow-up and continued evaluation.

Many of these problems would disappear if the procedure was used, as by podiatry, for a postgraduate experience preceding licensure. As such a program, it would have distinct merit in preparing students for practice.

Of the three external programs, however, the first two seem to offer the most consistent merit although not for exactly the same reasons. The last can serve, but with much more difficulty, and would appear to be expendable whenever and wherever the first two can satisfactorily deal with the student population. □

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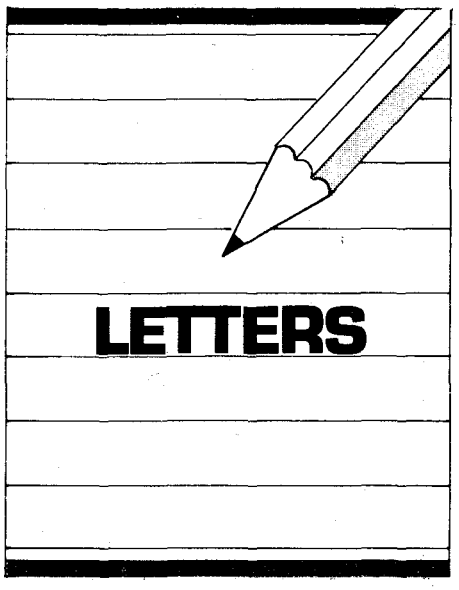
*Indiana University, School of Optometry*

## Reference

1 Brazelton FA: The status of academic optometry in projecting clinical competence from existing written examinations. *J Optom Educ* 7(2), fall, 1981.




Re: **Journal of Optometric Education**

**Dear Editor:**

Our consultants who advise us on literature selection have recently completed an evaluation of 95 journals. On the basis of their ratings, we have selected 23 titles to be indexed for *Index Medicus* and our MEDLINE data base. The above named journal was not one of those accepted at this time.

The fact that this journal was not accepted does not imply any particular deficiency. It merely indicates that, in our opinion, it was less needed by the user community served by *Index Medicus* at this time than journals currently being indexed. Since journals and user needs change with time we will reconsider a journal if requested after a two-year interval.

*Clifford A. Bachrach, M.D.*
*Editor,* Index Medicus

Editor's note: *We certainly will request a reconsideration of JOE after the two-year interval and, in the meantime, will make every effort to improve the content of JOE in such a manner that it meets the user needs and other criteria established by* Index Medicus.

**Dear Editor:**

First of all, as a newcomer to the field of optometric education, let me express my most appreciative reaction to the *Journal;* it is one of the best professional journals I have ever seen and is certainly worthy of the various awards you have received.

While serving as Dean Heath's assistant for student affairs and external relations, I am completing my dissertation (Ed.D., Higher Education Administration). My topic is the role of faculty development in preparing professional optometrists, and I am asking for your assistance. While reading the several pertinent articles in recent issues of JOE, I found reference to "three JOE papers on teaching methodology, prepared during 1980-81"; I would appreciate your help in obtaining copies of these papers, plus other material which you might deem to be useful to me.

In a related vein, I am interested in knowing when the *1980-81 Annual Survey of Optometric Educational Institutions* will appear; I am tracking certain aspects of the information for the past few years and desire to update with the most recent data.

Again, your efforts are resulting in a fine publication. I thank you in advance for any assistance which you can render.

*Ronald C. Jensen*
*Assistant to the Dean*
*Indiana University*
*School of Optometry*

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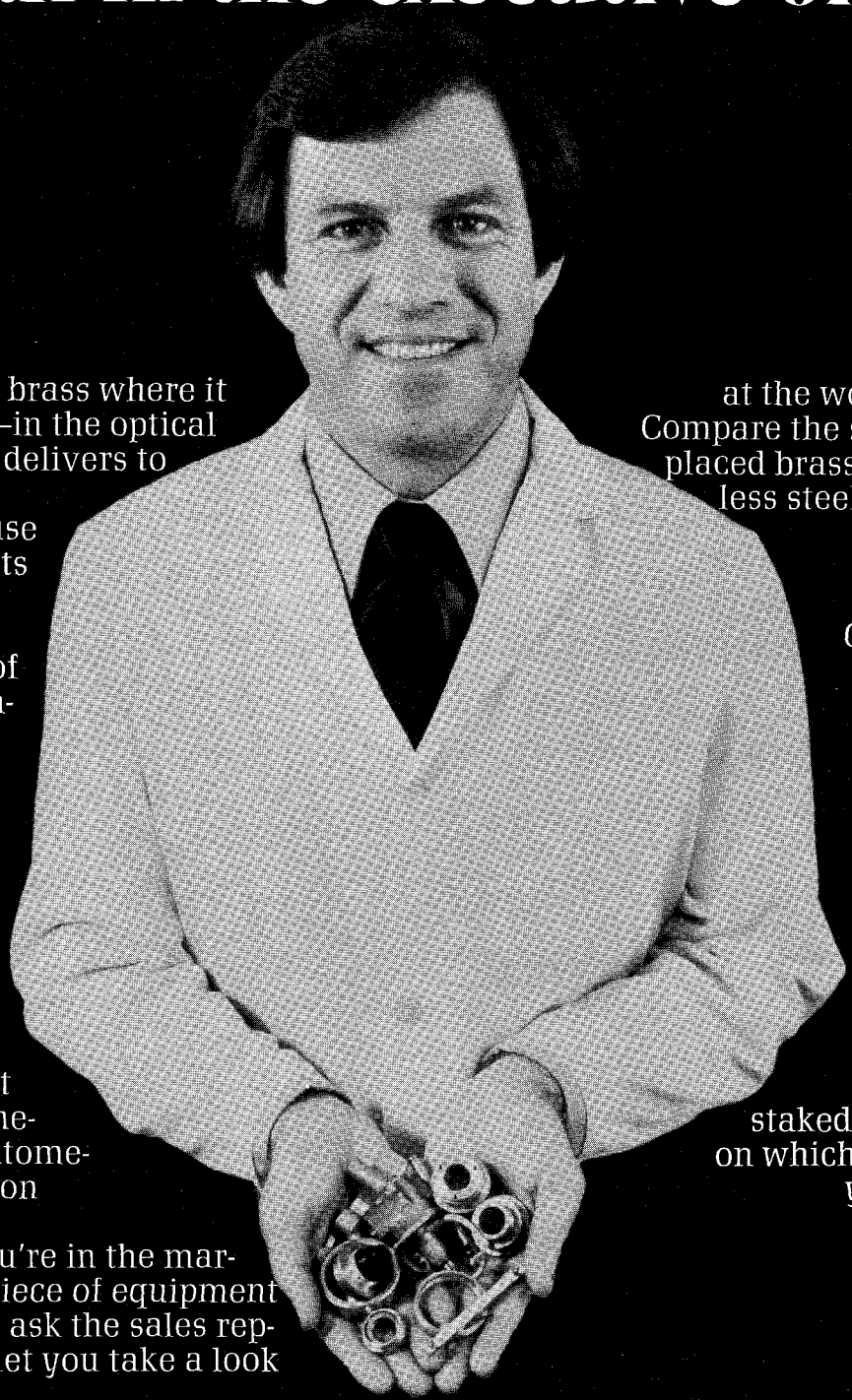

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# Evaluation of Quality Assurance Programs for Externships

Joseph Ruskiewicz, O.D., M.P.H.

The Pennsylvania College of Optometry is addressing the shortcomings of traditional clinical education created by large, single-discipline teaching facilities in a number of ways. One of these is the use of external facilities as clinical training sites. These facilities include private practice settings as well as clinics in HMOs, Veterans Administration facilities, outpatient clinics, military clinics and the Indian Health Service. With the assistance of a Special Projects Grant in 1975, the college began to formalize and expand what is now called the "Externship Program."

*Joseph Ruskiewicz, O.D., M.P.H., is assistant professor of public health and acting coordinator of external education at the Pennsylvania College of Optometry, Philadelphia, Pennsylvania.* *This paper was presented before the Section on Optometric Education of the American Academy of Optometry in Chicago, Illinois, December, 1980.*

As other schools and colleges of optometry begin to take advantage of externship programs, the number of students trained through this medium will increase dramatically. For all of the benefits of training students off campus, there is one definite drawback which can be summed up by a rule of thumb used in business: "the difficulty in controlling the quality of remote operations increases with the square of the distance between the manager and the remote location." As this axiom points out, mechanisms to assure that quality patient care and education occur must be an integral part of any external education program.

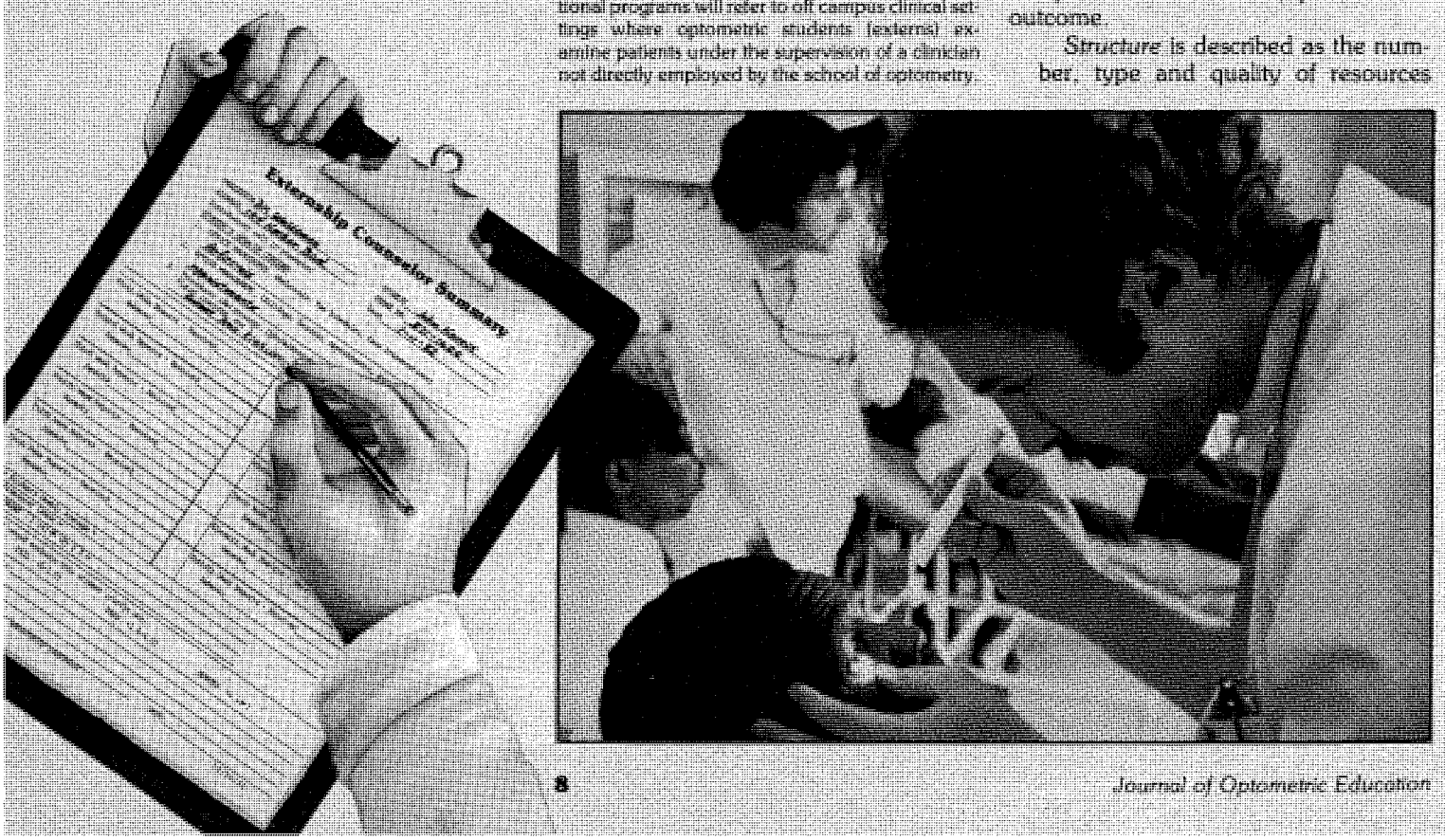
The intent of this paper is to present a format for evaluating quality assurance programs dealing with clinical external education.* The format has been designed to evaluate quality assurance procedures for both the educational and service aspects of eye care. The procedures of the Pennsylvania College of Optometry's Office of External Educational Programs (OEEP) are reviewed to show how quality assurance techniques can be categorized. They are not presented as a model, but rather as procedures which help assure that students receive a high quality clinical education while delivering the best possible eye care. Before reviewing the quality assurance procedures, the categorization criteria will be discussed.

*For the purpose of this paper external educational programs will refer to off campus clinical settings where optometric students (externs) examine patients under the supervision of a clinician not directly employed by the school of optometry.

## Categorization of Procedures

In order to evaluate the overall effectiveness of a quality assurance program, health care delivery must be divided into its basic components. Donabedian[1] describes health care as having three components: a structure, process and outcome.

*Structure* is described as the number, type and quality of resources



used in the production of services. The structural appraisal for eye services can include measuring the academic credentials or clinical training of a provider, the number and types of support personnel involved in delivering care, and the amount and kind of equipment that are available. As an analogy, in baking a cake: the bowls, the flour, the sugar, the mixers and oven are the structural components. Structural appraisal is generally recognized as inferior to process and outcome measure because it is an indirect measure of quality. While inferior resources make it very difficult to provide high quality care, excellent resources do not guarantee excellent patient care. Structural appraisal is often used because people are accustomed to its use, and information about it is easily obtained and quantified.

Currently structural review receives the most attention in optometric teaching clinics. Attention is paid to assuring that clinicians have excellent academic credentials and that the facility itself is modern and equipped with all of the latest equipment. While this approach offers the advantage of dealing with fairly concrete and accessible information, it is no indication that good quality care will be delivered. The converse is fairly certain: old, inadequate equipment and unqualified personnel will deliver low quality care.

*Process Appraisal* is a measure of quality based on the events and activities that do or do not occur when the patient and the health care facility interact. This would include determining whether proper tests were performed, such as near point tests for a school age child complaining of headaches while reading, and whether the treatment was consistent with the diagnosis. To follow the analogy of baking a cake, process review would analyze whether the proper amount of sugar, flour and other ingredients were used to bake the cake. One would also attempt to look at whether the correct baking pan and temperature were used to bake this particular cake. Process review is considered superior to structural review and is most commonly measured through the patient record or direct observation. Any criterion or protocol developed for diagnosis or treatment of a certain condition is a type of process review.

Process review, the one most familiar to clinicians, is based on the assumption that if the proper procedures are used, the optimum outcome will be achieved. The drawback to this is that a variety of methods to diagnose or treat a certain condition may exist. Unless definitive clinical trials have been carried out, it is impossible to define accurately the best process. As a consequence, reviewing the process of care often depends upon subjective feelings rather than concrete scientific evidence.

In order to overcome this drawback, criteria for practice can be developed. A great deal of time and effort are needed to develop proper criteria that are acceptable to clinicians being reviewed.

*"Given the current state of the art for assuring the quality of the three components of health care, offices of external educational programs should attempt to incorporate all three."*

*Outcome Appraisal* is an evaluation of the results or consequences of eye care. Outcome measurements attempt to assess the degree of improvement of vision/eye health due to the services received. In other words, did the patient improve as a result of interaction with the eye care system? For the example of baking a cake, the proof is in the pudding; did it rise, and does it taste right?

Of the three, outcome appraisal is considered superior to process and structure because it is the ultimate indicator for quality since it focuses on the end result of care, namely, whether the provider was able to reach the appropriate goals for the patient.

However, there are limitations that must be understood when using outcome as a measurement. Outcome assessments are difficult to perform because they may require re-contacting the patient to discover if the appropriate outcome was reached. Additionally, many factors other than the vision care may influence the outcome: genetics, diet, environment, life style and motivation are examples. These are factors over which the provider may have very little control, but which nevertheless greatly affect the final outcome. These limitations are mentioned not to demonstrate that outcomes are inappropriate indicators of quality but to emphasize that they must be used with acumen.

Given the current state of the art for assuring the quality of the three components of health care, offices of external educational programs should attempt to incorporate all three. In reviewing the quality assurance procedures used by PCO, both service and education were analyzed in an attempt to assess whether the external educational programs are meeting the dual goals in all three components. A schematic model was developed as shown in Table 1. Along the left hand column the various quality assurance procedures are listed, along the top the various quality assurance components are marked according to the degree of coverage offered. Each procedure will be described to indicate how the assessments in Table 1 were derived.

## Quality Assurance Techniques

*Preceptor Application Form*

The first contact preceptors have with the Office of External Educational Programs is the completion of a Preceptor Application Form. This form asks for professional and demographic information on the preceptor, along with educational background. The preceptors must also supply information indicating whether the office has available resources to deliver high quality patient care. Representative examples of this would include: whether the preceptor has equipment such as slit lamps, indirect ophthalmoscopes, proper record keeping techniques, and support personnel.

By asking the potential preceptor

about his/her equipment and record keeping techniques, the OEEP attempts to ascertain whether the structural components exist for delivering quality care. In addition, structural components for education are evaluated, such as proper patient load and adequate space for allowing a student to work semi-independently. As seen in Table 1 this procedure is very effective in evaluating the structural components needed for quality service and education.

In order to assess whether the office also will be capable of providing a proper atmosphere for education, the applicant is asked whether he/she is willing to perform as an educator in addition to inquiries concerning clinical education. The first question allows a beginning, minimal evaluation of the clinician as an educator. The inquiries give some insight into the process of clinical education which would be used at that particular site. Finally, letters of reference from local optometrists give some indication on the outcome of patient care delivered by the applicant. Many times practitioners in the area have a fairly good idea whether a peer is reaching proper outcomes. Patients switch doctors for many reasons, one reason being unsuccessful handling of conditions. The letters of reference give minimal indication of the typical outcome of care.

*Site Visits*

Depending on the location, scheduling and budget for travel, a site visit is made to preceptors. This site visit confirms information given in the preceptor application by allowing a first hand look at the structural components needed for both service and education and, through observation of the optometrist performing examinations, a clear look at the process of care. More importantly, the visit allows the Office of External Educational Programs to analyze whether good patient care is being delivered. This is done by looking over patient records and discussing cases with the preceptors. The site review also allows the office to discern whether there is adequate space and resources to provide the student with a good learning experience. The preceptor also can be questioned as to his or her knowledge concerning clinical education.

The site visits are also valuable as an educational tool for the Office of External Education Programs. On these visits, staff from OEEP can answer questions, as well as describe effective clinical teaching techniques. Furthermore, by having a site visit, the Office of External Educational Programs shows the preceptor the level of commitment by OEEP in assuring high quality preceptorships.

**TABLE 1**

**Clinical and Educational Reviews for Externships**

| | Quality of Service | | | Quality of Education | | |
|---|---|---|---|---|---|---|
| **Type of Review** | **Structure** | **Process** | **Outcome** | **Structure** | **Process** | **Outcome** |
| Preceptor Application Process | A | | a | A | a | |
| Site Visit | A | A | | A | | |
| PPAE | | A | a | | A | |
| Logs | | a | a | A | | |
| Preceptor Evaluation of Preceptee 6th and 12th weeks | | | | | | a |
| Preceptor Program Evaluation | | | | | a | |
| Preceptee Program Evaluation | | | | | A | A |
| Externship Counselor Summary | | A | a | | A | a |
| Advisory Committee | A | | | A | A | |
| Student Council Advisory Committee | | | | A | A | |
| Student Externship Advisory Committee | | | | A | | |
| Externship Evaluation by Optometric Graduates | | | | | | A |

A—Substantial Coverage a—Minimal Coverage

*Patient Problem Analysis Evaluation (PPAE)*

This summary of a patient care experience using the Problem Oriented Medical Record (POMR)[2] format allows a review of the type of care being delivered by the student and preceptor. Since this is basically a summary of the patient encounter, it is the main source for evaluating whether the training site is delivering proper vision/eye care.

At the bottom of the PPAE there is a section for comments from the preceptor. This allows the externship counselors at the college to assess whether or not the preceptor is performing adequately as a clinical educator. This section also allows the preceptor to comment on how the student has performed on this particular patient care interaction.

The PPAE, being a summary of the patient's record, is an excellent source for evaluating the process of care. Many times interns also will indicate whether the patient's problem was alleviated, thereby allowing an assessment of the outcome of care. The comments written by the preceptor allow an evaluation of the process of education.

*Patient Care Logs*

The patient care log can be used to identify whether certain tests such as slit lamp, tonometry and blood pressure checks are being performed routinely as needed at the training site. However, the most valuable information currently being extracted from patient care logs is in the area of assessing the educational aspect of the preceptorship. The patient log allows the Office of External Educational Programs to quantify the number and type of patient care experiences encountered by the student. This is done through a computer compilation of all the diagnoses, special testing and treatments given during the externships.

The information on testing is used to assess the process of care. The diagnosis recorded on the logs also allows an assessment of whether the proper amount of outcomes is being made. Most importantly the logs measure a basic structural component of clinical education, the number of patients being seen.

*Preceptor Evaluation of Preceptee (At 6 and 12 Weeks)*

This form is concerned with assessing the level of competence at which the preceptor feels the preceptee is performing. This gives an indication of how well the preceptor has succeeded in teaching and evaluating the student.

*Preceptor Program Evaluation*

This feedback mechanism is used primarily to gather information from the preceptor on his/her opinion of the performance of the Office of External Educational Programs. It assists in evaluating the efficacy of the office in the educational process of externs.

*Preceptee Program Evaluation*

The purpose of this evaluation is to assess, from the standpoint of the student, the quality of the educational experience. This includes an evaluation of the process and outcome of education.

*Externship Counselor Summary*

This is the form used by externship counselors to summarize their viewpoints on the preceptor and preceptee. Since this information is based on PPAEs, weekly logs, and other interaction with preceptors and students, the quality assurance aspects are very valuable. This serves as an excellent summary, with the counselor's insights on the quality of the process for education and service, as well as some insight on the outcomes for both.

*Advisory Committee to the Externship Program*

This committee has been serving as a review group to the Office of External Educational Programs. The committee has been involved in helping to assess the various activities involved with externships, especially on the type of resources needed in optometric offices to deliver high quality care. The committee appears to have been most useful in helping to define a potentially successful preceptorship in the area of clinical education. In general, the committee gives advice on the structural components needed for proper service and education, but also has input into what procedures are used by a model clinical educator.

*Student Council Advisory Committee*

This recently formed group advises the coordinator of the externship program of student concerns about the externship program; they also work with the coordinator to improve standards for clinical education. The committee also advises the coordinator of problems encountered by students and recommends solutions. The majority of input by this group has been in the area of the structural and process components needed for proper clinical education.

*Student Externship Advisory Committee*

This group of third year students advises the externship scheduling officer of any student problems in developing the schedule for externships during their fourth year. This scheduling is a structural component of the educational process.

*Externship Evaluation by Optometric Graduates*

Evaluation forms are sent to recent graduates. These practitioners are asked to comment on their externship training. This is an excellent means of measuring if educational objectives (outcomes) have been met.

## Conclusion

By looking down the columns of Table 1, one can determine the degree to which each of the three components is being monitored for quality of care and education. The relatively "weak" link in the OEEP program is outcome review for the quality of services. In order to assess this area using traditional measures of outcomes, a great deal of development would have to be performed, well beyond the resources of PCO. Tindall, Henderson and Cole, at Hershey Medical Center, developed a system for diagnostic outcomes through the use of a problem category index.[3] A similar system is currently under development at the Pennsylvania College of Optometry.

In summary, a schematic model has been developed whereby quality assurance procedures used in conjunction with external education programs can be evaluated. Three components—structure, process and outcome—for both the quality of care as well as education are categorized. These procedures must be developed and implemented before proper evaluation of "remote sites" can occur. □

## References


1. Donabedian A. Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly*, Vol. XLIV, Number 3, Part 2, July, 1966.
2. Weed L. *Medical Records, Medical Education, and Patient Care*. Cleveland, Press of Case Western Reserve University, 1969.
3. Tindall H, Henderson R, and Cole A. Evaluating family practice residents with a problem category index. *The Journal of Family Practice* 2(5), 1975.

# The Off-Campus Clinical Program of the College of Optometry, Ferris State College

James E. Paramore, O.D.

In order to discuss quality control in the off-campus clinical program of the College of Optometry, Ferris State College, it is necessary to first discuss the clinical education program at Ferris State and briefly describe the various clinics affiliated with the college. Administratively, the dean of the college has ultimate responsibility for the entire optometric program. The director of clinics has direct responsibility for the clinical programs both on-campus and off-campus. The faculty consists of eighteen full-time individuals at the campus, one full-time person at one of the affiliated clinics, one adjunct professor also at one of the affiliated clinics, and a total of forty-six clinical associates at both the on-campus and off-campus clinics. Clinical associates are practicing optometrists in the state who serve as salaried part-time faculty.

Ferris State College is on the quarter system, and the first three years of the professional program, likewise, are on the quarter system. However, at the completion of the third year in optometry, the students begin a one year clinical rotation consisting of three, fourteen-week sessions. Since the academic portion of the program has been compacted into the first three years, the last year can be used primarily for clinical education. Each student is required to spend one of the three rotations at the campus clinic. The other two rotations are spent at two of the affiliated clinics.

In addition to the campus clinic, Ferris currently has five affiliated clinics. These include the Michigan Veterans' Facility in Grand Rapids, the Optometric Institute and Clinic of Detroit, the Veterans' Administration Hospital in

Saginaw, the Ionia Prison Complex, and the State Prison of Southern Michigan in Jackson. In addition, the college currently is negotiating with Michigan State University to have a clinic at the Clinical Center in Lansing, which is the outpatient teaching facility for the Schools of Allopathic Medicine, Osteopathic Medicine, and the School of Nursing at Michigan State.

The campus clinic of Ferris State College consists of approximately 8,000 square feet of the 30,000 square feet in the College of Optometry building. During their on-campus clinical rotation, the students become involved with a variety of off-campus clinical activities. These off-campus clinical activities include the Millet Learning Center in Saginaw, the Pediatric Audiology Clinic at Central Michigan University in Mt. Pleasant, Michigan, and three facilities in Muskegon, Michigan: the South Shores School, the Muskegon Regional Center for Developmental Disabilities, and the Pre-School Program for Handicapped Children. Students from the campus clinic also see patients at the Michigan Veteran's Facility, which was mentioned previously. This facility is under the Michigan Department of Public Health. It is a long-term care facility and serves approximately 700 geriatric patients. The optometric facilities include one general examination room and one room for dispensing, adjusting, and repair of spectacles.

The Optometric Institute and Clinic of Detroit is a non-profit, tax exempt corporation which was founded in 1969. It primarily serves residents of the greater metropolitan Detroit area and is accredited by the Council on Clinical Optometric Care of the American Optometric Association. The current facilities include four general examination rooms, several ancillary testing rooms, a dispensary, and offices. The clinic is in the process of designing and moving into new facilities. These new facilities will be located in a professional office building adjacent to the Medical Center of Wayne State University in Detroit.

The Veterans' Administration Hospital in Saginaw provides both inpatient and outpatient care to eligible beneficiaries of the Veterans Administration Health Care Program. The current optometric facilities include one general examination room and pretesting and ancillary testing areas.

Students assigned to the Ionia Prison Complex will see patients in three correctional facilities in Ionia. These facilities are the Riverside Correctional Facility, the Michigan Reformatory, and the Michigan Training Unit.

The Riverside Correctional Facility is a medium security prison and has about 700 residents. The word "resident" is the term used by the Michigan Department of Corrections in referring to inmates in the state's correctional system. The optometric facilities at Riverside are housed in a modern module unit which has three fully equipped general examination rooms, as well as space for ancillary testing equipment and reception facilities.

The Michigan Reformatory is a maximum security facility and houses approximately 1,600 residents. The facilities here include three general examination rooms, one ancillary testing room, a dispensary, and a reception area.

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*This paper was presented before the Section on Optometric Education of the American Academy of Optometry in Chicago, Illinois, December, 1990.*

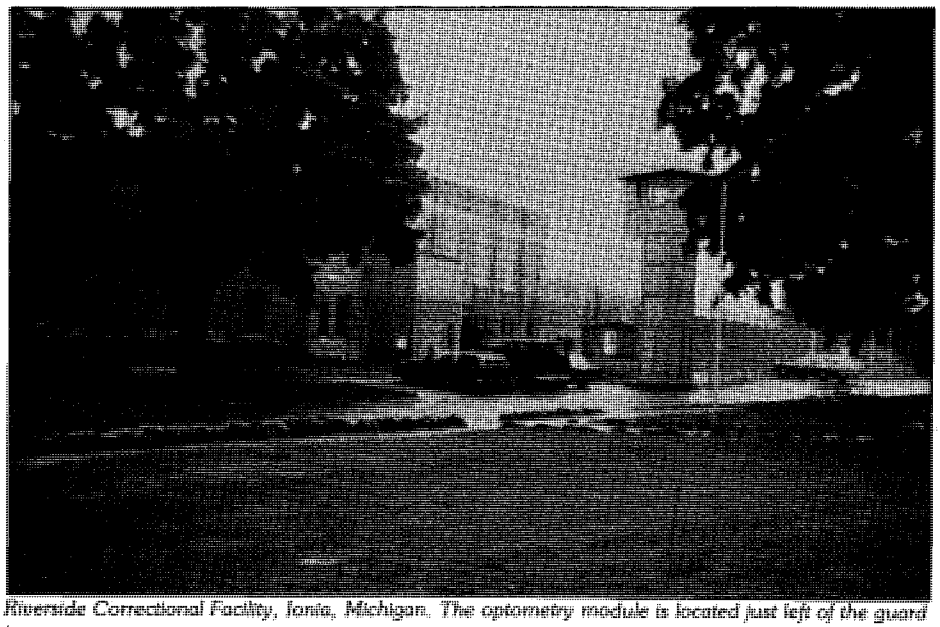
The Michigan Training Unit (MTU) houses approximately 650 male residents from the ages of 16 to 21 who have demonstrated an aptitude to learn a trade. Residents of this facility are examined at Riverside prior to their placement at MTU. Ferris students provide vision screenings at MTU as needed. Residents in need of further vision care are transported to the Riverside Correctional Facility.

More than 5,000 residents are housed at the State Prison of Southern Michigan, a maximum security prison. As in Riverside, the optometric facility is a modern module unit attached to the infirmary and consists of four general examination rooms, as well as ancillary testing and reception areas.

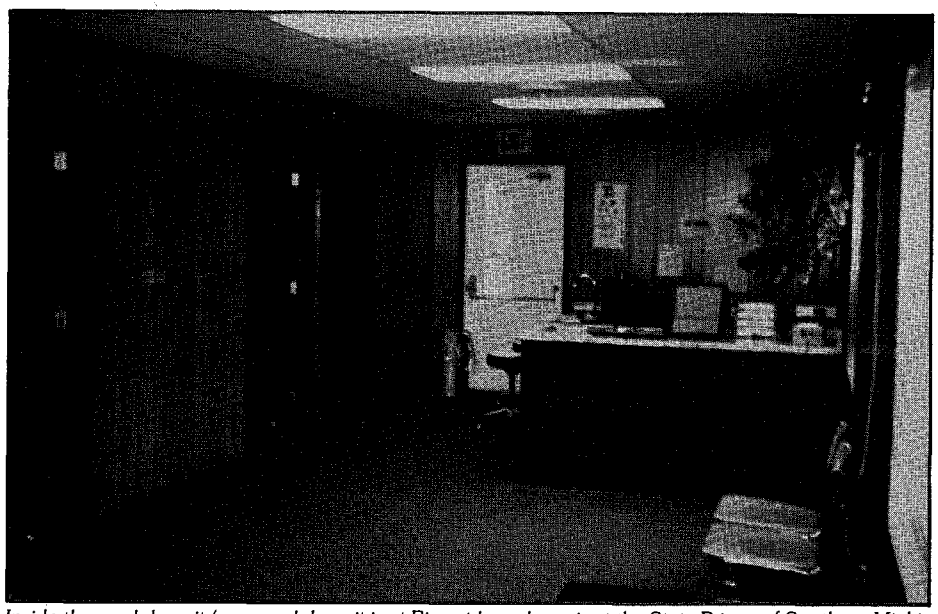
The Reception, Guidance and Counseling Center at the State Prison of Southern Michigan has responsibility for processing all new male admissions to the state's correctional system. Although it is physically a part of the State Prison of Southern Michigan, the Reception, Guidance and Counseling Center is functionally independent. The center processes approximately 8,000 new admissions annually. During a ten to fourteen day period, these new residents receive a comprehensive health screening including psychological and vocational skill tests. As part of the health screening, optometry students assigned to the State Prison of Southern Michigan administer an expanded M.C.T. like vision screening. Two rooms are provided at the Reception, Guidance and Counseling Center for these vision screenings.

With regard to quality control in the off-campus clinics, a number of steps have been taken to insure excellence. First, and probably most important, is the fact that all of the optometrists working with the students both on-campus and off-campus are faculty of Ferris State College. This means that with the exception of one adjunct professor, all individuals with the responsibility of teaching the students are salaried by Ferris State College. This gives Ferris State College considerable influence over the daily operations of the affiliated clinics and certainly enables Ferris to establish the policies with regard to clinical standards, grading, patient scheduling, etc.

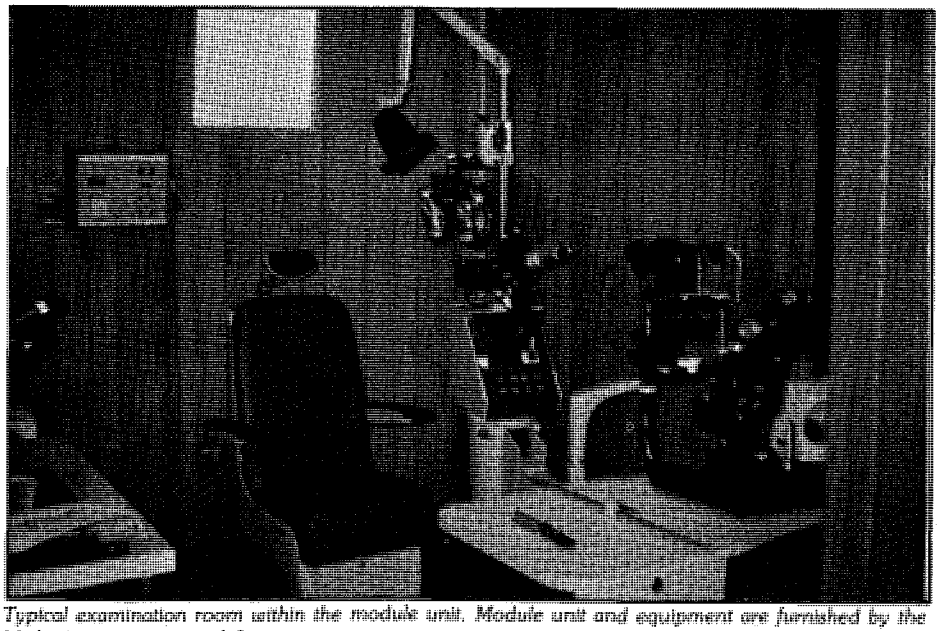
Another factor which leads to quality is the use of formal affiliation agreements between Ferris State College and the various affiliated clinics. These agreements are very specific on certain points and again enable Ferris to maintain significant control over the quality



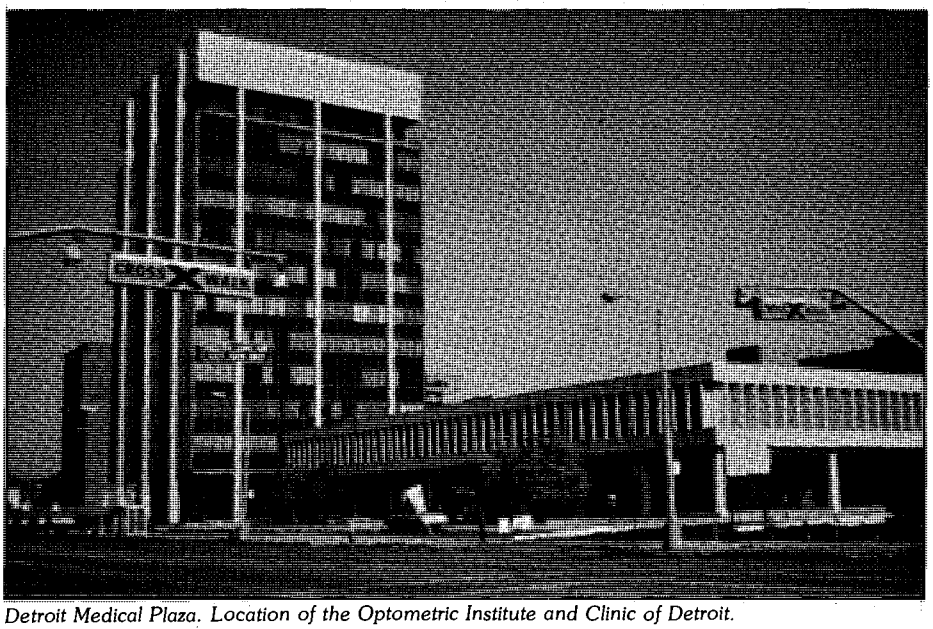
*Riverside Correctional Facility, Ionia, Michigan. The optometry module is located just left of the guard tower.*



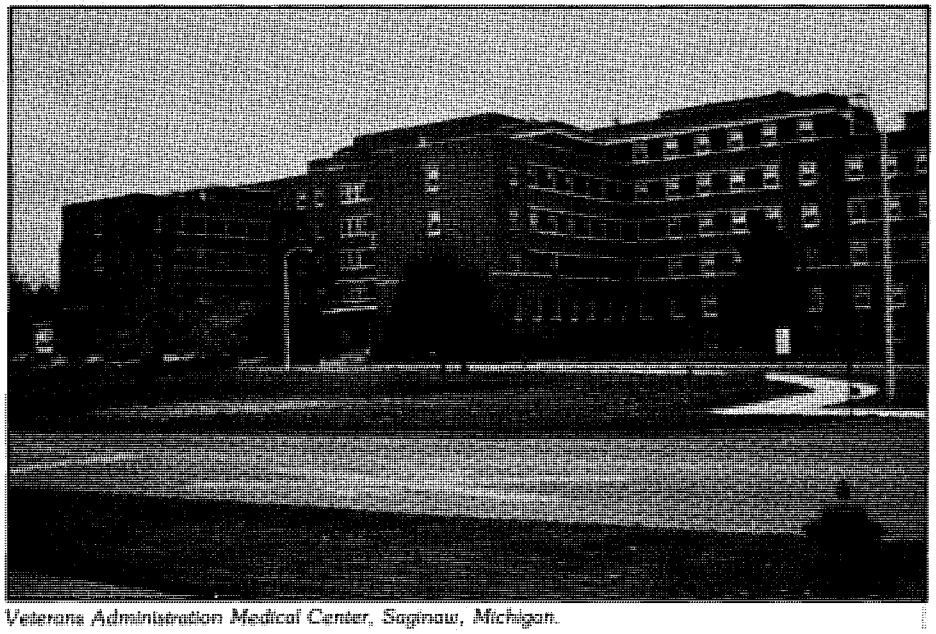
*Inside the module unit (one module unit is at Riverside and one is at the State Prison of Southern Michigan). Individual examination rooms are located to the left.*



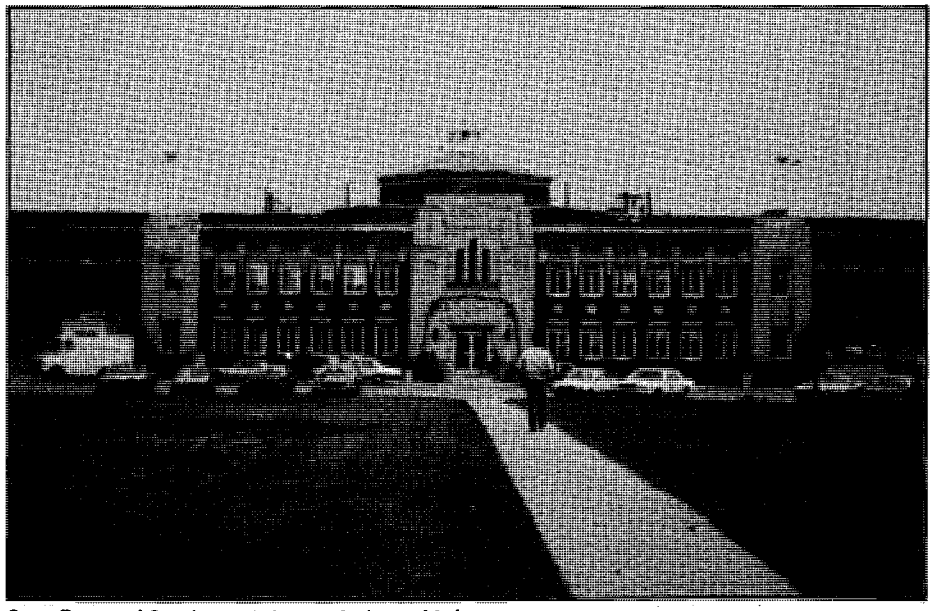
*Typical examination room within the module unit. Module unit and equipment are furnished by the Michigan Department of Corrections.*



*Detroit Medical Plaza. Location of the Optometric Institute and Clinic of Detroit.*



*Veterans Administration Medical Center, Saginaw, Michigan.*



*State Prison of Southern Michigan, Jackson, Michigan.*

of education the students receive at the various clinics.

Another assurance of quality is frequent visits to the affiliated clinics by various administrators and faculty of the College of Optometry. The college maintains its own vehicle for this purpose and has access to the college airplane. During visits to the affiliated clinics, faculty members present seminars to the students, as well as maintain the close personal contact necessary with the off-campus students and faculty.

Another assurance of excellence is the bringing of all clinical associates to the campus clinic at least once a year for extensive educational purposes. The purpose of this required educational meeting is to make certain that all clinical associates are kept abreast of the latest developments in optometry so that they can better provide quality education to the students.

*". . . The best assurance of quality in any program is having quality individuals involved in the education of the students."*

In summary, quality control in the off-campus clinical program is maintained by having those optometrists involved in teaching the students salaried by Ferris State College, by having formal affiliation agreements with the various off-campus facilities, by frequent contact with the facilities, including visits by administrators and faculty of the college, and by keeping all of the faculty involved in the off-campus clinics aware of the latest developments in the profession. However, it is felt that the best assurance of quality in any program is having quality individuals involved in the education of the students. The program as it now exists enables Ferris to attract and maintain clinical faculty of the highest caliber. □

# University of Houston College of Optometry Externship Program

Harris Nussenblatt, O.D., M.P.H.

The University of Houston College of Optometry, within the last year, has established an external clinical program which provides fourth professional year students with multidisciplinary clinical activities in facilities serving underserved areas. This clinical activity is an integral part of the doctor of optometry program, comprises one full semester (16 weeks) of activity during the three semester final year, and follows three community health optometry courses. In this manner, students apply the community health principles learned in the didactic portion of the curriculum to the clinical activities of the externship.

The program was established to provide patient care experiences for fourth year students in settings outside of the college's central clinical facilities. This arrangement has enabled students to increase the total number and variety of patients seen during their training program and to enhance their competency in managing vision and health problems. As part of the rotation, the students are expected to use the knowledge gained from their clinical and didactic course work in the performance of appropriate diagnostic and therapeutic regimes in the management of patients' vision/health problems.

The multidisciplinary practice setting allows the students to relate to the role of the optometrist within that facility and to communicate with other providers in caring for patients. Since the externship sites are primarily located in underserved areas, the students develop these skills within unique and often quite different environments and are able to observe the effects of culture, economics, and politics on the delivery of health care. This integration of clinical activities with the health care community permits the students to begin the transition from an academic setting to a community setting while remaining under the guidance and supervision of a preceptor.

Initial program development began in June, 1979, with an evaluation of the college's five Houston-area, part-time affiliated clinics. These clinics, in past years, had served as student clinical sites on a weekly basis (one-half or one day per week) and those that showed potential for full-time optometric services were included in the externship program. Since students were not able to leave the Houston area during the fall, 1979, semester, these Houston-area clinics served as initial sites for the program. By January, 1980, out of town externship sites had been developed in conjunction with a curriculum revision which permitted students to leave the Houston area for seven-week rotations in military and Indian Health Service facilities (in addition to the Houston-area clinics). This initial development phase was essentially a transition period during which the full sixteen-week program was developed. In June, 1980, the first group of new fourth year students was assigned externships under the new fourth year curriculum which divided the last twelve months of training into three components: an externship, a clinical, and a didactic semester of activity.

The clinical sites that are presently available for student rotations include five Houston-area clinics and twenty-one out-of-town sites. The present sites include two neighborhood health centers, one health maintenance organization, a state school for the mentally handicapped, a city health department clinic, a specialized optometric clinic, eleven military clinics, four Indian Health Service clinics and an optometric

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center. All of the Houston-area clinics and one Indian Health Service clinic are staffed by full-time college faculty. Sites are selected based on their multidisciplinary characteristics, the presence of a full-time optometrist, adequate space, equipment and patient load for students, and are normally publicly funded facilities located in the home states of students or in states where students are interested in practicing. A questionnaire that reviews the site suitability, preceptor profiles, and a site visit are completed either before the initial student arrives at the site or during the first student's rotation.

Each of the externship sites offers the students a unique perspective in relating to multidisciplinary roles within that center as the degree of cooperation and the opportunities for working with other health professionals vary from site to site. Most of the military sites have ophthalmology services in which students are able to see patients and work with the ophthalmologists on a regular weekly basis. Some military sites provide the students with the opportunity of observing patient care activities in other hospital departments such as internal medicine, pediatrics, etc., which gives the students a better view of the overall patient care activities in the facility.

Other sites such as the Indian Health Service or neighborhood health centers provide a different type of interaction since patients are often referred for optometric evaluation by the various health professionals, permitting the students to communicate with the other professionals about particular patients.

The sites vary considerably in the type of care and professional staffing, ranging in size from military medical centers with primary, secondary and tertiary care services, to 35-40 bed IHS hospitals providing outpatient services as well as general inpatient care to small one-physician neighborhood health centers. Generally speaking, the smaller the facility, the better the student's opportunity is to get to know all the various professionals and develop a working relationship with them. Besides providing the opportunity to work with individuals who are not optometrists, the students have favorably commented on the opportunity to work with optometrists who are not on the college's full-time faculty or with externs from other colleges. This is particularly true in instances where the preceptor is a graduate of another optometric institution and has been practicing for a number of years. A few of the sites have externs from other schools in addition to the college and the exchange of information between students also aids in the learning experience.

Since the sites vary in the services provided, the student experiences also can vary between sites. As an example, the Indian Health Service facilities see more children than adults while the military sites generally see more persons over age forty than other sites. In many of the sites the optometrist is the only eye care practitioner, and this exposes the students to a wide range of interesting and unusual problems that need managing.

Some of the difficulties encountered due to the variability in the experiences between students and services offered at the sites are that some students are not often exposed to the full range of optometric services, particularly contact lens and vision therapy services. While more of the sites are now providing the students with contact lens experience than before, vision therapy or low vision services frequently are not made available, and many times even the contact lens experience is not of the frequency found in practice.

The patient load is often heavy at the extern sites, and there is a tendency to provide the student with a volume of patients that he/she is not ready to deal with. Efforts are made with preceptors to insure that students are not overloaded with patients and that appropriate instruction occurs with students. Externship sites are not established by the college to decrease the backlog of patients at a site, and the site personnel realize that the primary reason for the program is to provide instruction in patient care activities for students.

With a wide variety of sites and potential experiences, externship programs cannot universally provide each student with the same type of experiences. When viewed in the context of the whole clinical curriculum, though, this variability provides a unique opportunity to focus student learning in the last year on whatever direction the student feels will be appropriate to meet his/her future needs. If, for instance, a student wants to see more pediatric,

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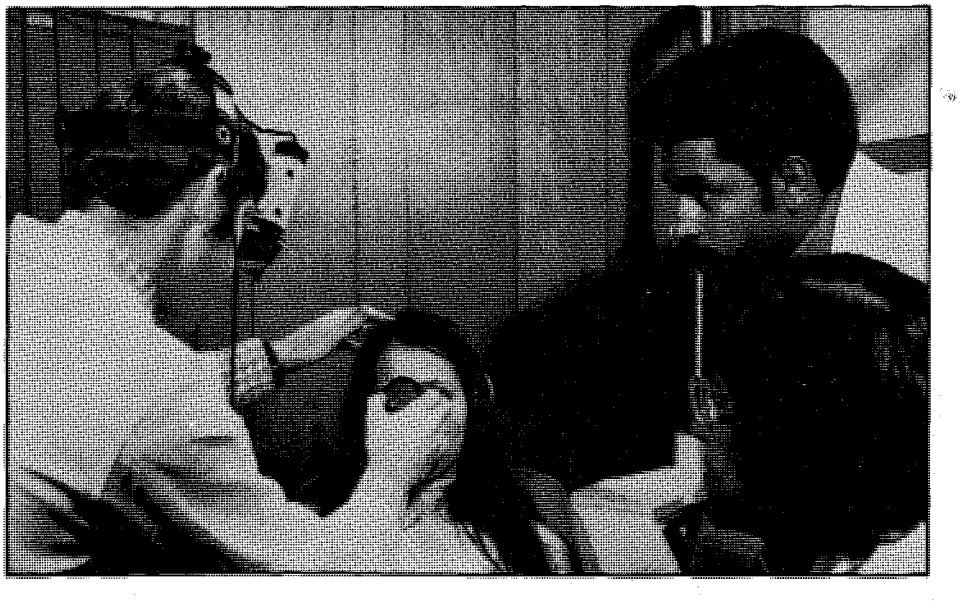


geriatric, or ocular disease patients, he/she can be assigned to a site where that will be possible.

Student assignments to the clinics are made as a result of meetings held with the students approximately eight months prior to the first rotations. Students submit their requests to the program coordinator who makes site assignments based on the student's clinical ability obtained from clinical evaluations submitted by the college faculty and the student's request. Site assignments generally are made five months prior to the first rotation and are made for the full fourth year. Student performance during the third and fourth years is evaluated by the clinical faculty, and students who do not perform adequately are either delayed in going on externship or are assigned to a site more in keeping with their abilities, skills or need for supervision. Assignments also take into account the student's personal needs since students forced to go to a clinic where they do not want to go seldom benefit from the experience, particularly if unexpected expenses are involved.

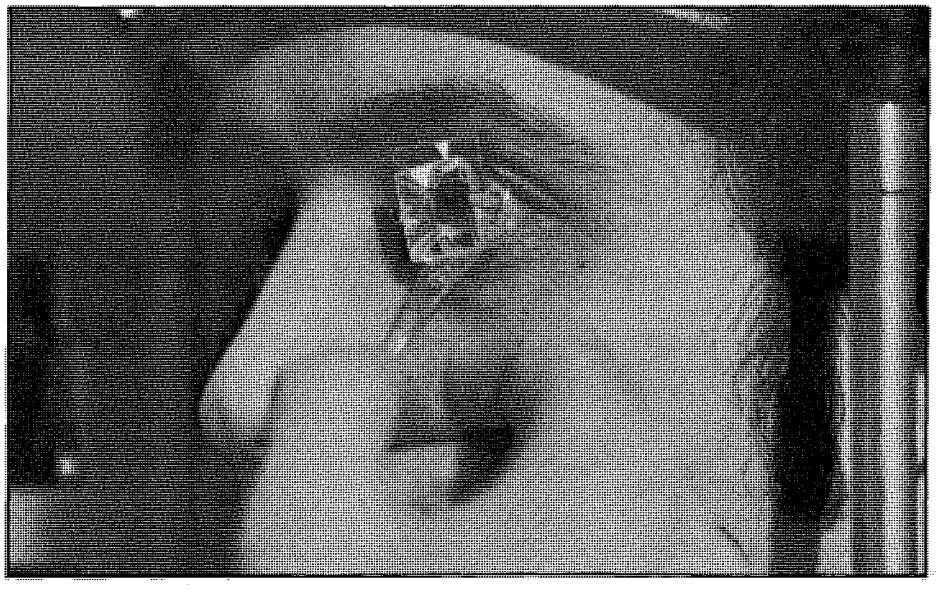
The externs, in addition to completing their clinical activities, are responsible for maintaining a patient care log, a patient care report, and an end of rotation evaluation. The patient care log details the types and number of experiences and is computerized to give printouts of specific types of patients seen at each site as well as the specific types of problems seen by each student. Students also complete a weekly patient care report summarizing individual patient care experiences that have been managed during their rotation. These are returned weekly to the program coordinator for review. At the end of the rotation, students evaluate the effectiveness of the program and make recommendations for improvement. The preceptor completes two evaluations on the student: one at the midpoint of the rotation and one at the end of the rotation, looking at the clinical skills, knowledge, patient relationships and clinical responsibilities of each student.

The various report forms completed by the student are used not only to monitor the student's performance but also in the future will provide a mechanism for evaluating the acceptability of the types of patient encounters. It is anticipated that a computer program will be developed which will enable the college not only to monitor student encounters but also to provide timely feedback to students and preceptors concerning the variety of patients seen by the students. If, for instance, students are seeing too many young patients in relation to the clinic population as a whole the appointment adjustments can be made to increase the number of older patients and decrease the number of younger patients. Copies of the student evaluations of the externships are sent to the preceptors at the conclusion of the semester so that the preceptors may benefit from the student comments.

Students have been generally well pleased with their experiences, though many helpful suggestions have been made for program improvements. Students have commented specifically about the range of vision/health problems seen, differences in patient population from the college's central facilities (particularly the increased number of geriatric patients), the interaction with other providers, the ability to work closely with optometrists for an extended period of time in a new clinical environment, and the development of better communication skills with patients. Areas of concern to the students that have been mentioned as needing improvement concern the lack of maintenance of some equipment at the sites, extra personal costs in completing the externship, desire for more contact lens and vision therapy experience, and an occasional noticeable strain in relations between optometry and ophthalmology at some sites.

The college's externship program, although in operation just over a year, has given the optometry students at the University of Houston a new perspective on delivering optometric care. The program, as it is presently structured, provides approximately 21,000 patient experiences per year for the students, and has resulted in increased quantity and quality of student experiences. As the program grows and matures, it is anticipated that this community learning activity, when coupled with community health optometry course work, will enable the students to be better prepared to manage patient health problems and to interact with both patients and other practitioners. □

*"Students have commented specifically about the range of vision/health problems seen, differences in patient population from the college's central facilities . . . and the development of better communication skills with patients."*



# The Optometric Practitioner As a Teacher of Students

Irving L. Dunsky, M.S., O.D.

Today, in the health-care apprenticeship model, some practitioners play important roles in the education of students. With the growth of biological science and the emphasis on the university as the base for health professions education, the nonuniversity-based practitioner has moved more into the periphery of creating new health professions, and in many places has been removed entirely. An interesting feature of earlier years was the discovery that the practitioner may be of value in the education of future practitioners. As will be discussed here, the health-care practitioner has a perspective, a set of skills, and a growing body of experience that is of relevance for students. The health-care practitioner who has become a full-time faculty member of a college or university is, by definition, removed from engagement with some of those practical factors now becoming accepted as central to the creation of future practitioners. This matter is being given increasing attention internationally.[1-5] The present report deals with the purposes and methods of involving health-care practitioners as teachers of students.

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## The Reason

The overwhelming majority of health-care students in North America become private practitioners. Available figures indicate that about 90 percent of the medical graduates in the United States enter community-based practice, that only 4 percent have become full-time academicians, and that no school in the country has more than about 13 percent of its graduates in full-time academic work.[6] The impression is that in other countries an even higher proportion of medical graduates moves into a career of practice, as do the graduates of schools of the other health professions in both this and other countries.

A general principle is that one of the most important requirements of preparation for a particular career is an actual engagement during one's learning with the demands of such a career. If one is preparing to be a research scientist, then it is mandatory that the preparation include actual engagement with scientific research. It follows that if one is preparing for a life of practice of patient care, direct participation in actually providing patient care is mandatory.

The observation can be made that optometry clinics are not representative of the problems or characteristics of community-based optometric patient care. This does not deny the appropriateness of this clinical setting as a base for several important activities such as student learning of a particular skill or as the arena for testing and demonstrating a variety of specialized experimental approaches to patient care. Nevertheless, the observation can be made that the clinical setting is not adequate as the *exclusive* base for the preparation of optometric health practitioners. Future optometric health professionals need an opportunity to confront the range of demands, the potential rewards, frustrations and limitations of "real-world" community-based health care. In this way, they can acquire the competence needed for that type of care and formulate meaningful and informed decisions regarding the nature and setting of the work they choose to do after they have completed their education. To accomplish this, several schools and colleges of optometry recently have instituted externship programs.

An intriguing feature of the involvement of optometric health care practitioners in the systematic instruction of students is the potential that such activities hold for the continuing education of the practitioners themselves. As previously noted, one of the most effective devices for learning is to become responsible for helping others learn. Thus, the rationale for having health care practitioners teach students is doubled: it is necessary for the optimal education of the students, and it is highly desirable for the continuing education of the practitioners themselves.

## Goals and Objectives

The particular goals and objectives that any individual optometric practitioner might have for his work with students assigned to him will depend upon many factors, including the instructor's personal strengths, particular setting of work, and areas of interest. The practitioner must also consider the particular student's level of performance, career interest, and specific strengths and deficiencies, as well as the school's particular program, intentions, and specific requests. The enthusiasm of medical community practitioners for their work

as teachers of students and their views on goals to be pursued have begun to appear in the literature.[7] Despite continuous preceptorship programs of some schools and colleges of optometry, the optometric literature contains little information on the objectives, goals, and benefits of the optometric practitioner as a teacher of students, either to himself or to the students that he may instruct.

Notwithstanding the lack of views on goals to be pursued by the community-based optometric practitioner, a few categories of goals should be brought into primary focus for these practitioner-instructors. As a guide to instructional planning, these few are listed and briefly described below. They are not in any priority or significant sequential order.

*Application of Information.* In most programs to which optometric practitioners contribute, it can be expected that the students will have been exposed previously to, and have gathered, specific information relevant to the applied clinical setting. A general goal of much of the clinically based instruction offered by practitioners would be to provide students an opportunity to see and understand the ways in which the information they have acquired has practical value and application to specific clinical problems.

*Information-Gathering Skills.* The applied clinical setting is the optimal opportunity for students to acquire or substantially refine their skills in assembling and interpreting the type of clinical information most germane to the work they eventually will be doing. This may be information from and about patients, as well as from and about families, communities, and institutions—according to the domain of activity of the supervising practitioner. The problems with information-gathering are likely to be different in the work setting of the optometric practitioner from those in the clinical setting of the schools and colleges of optometry. It especially is desirable for the practitioner to identify the particular features of his or her work setting that are new and different for the student and to assure that appropriate experiences and supervision in the necessary skills are provided.

*Problem-Solving Skills.* The gathering of information is only the first step in a sequence leading ultimately to the solution and management of ocular problems. The actual steps in solving these problems—the sensing of existence of problems, the differentiation of important from unimportant problems, the formulation and testing of hypothesis—are all worthy and appropriate goals for the instruction provided by optometric practitioners.

*Communications Skills.* The work of most health-care practitioners depends substantially upon the exercise of effective communication with patients, as well as with colleagues, superiors, subordinates and others. The processes of collaboration, patient referral, team efforts and more require both oral and written communication and involve skills not necessarily introduced or practiced in the conventional optometric clinical learning setting. Therefore, these are worthy and appropriate goals for the optometric practitioner-based instructional setting.

*Office-Management Techniques.* For optometric students assigned to practitioners responsible for office management, it is particularly appropriate that the goals of the encounter include, if possible, assistance to the student in learning to grasp and manage at least some of the major problems in organizing and efficiently running an office as a base for the provision of optometric care. This sometimes neglected issue can make the difference in the efficiency, and thereby the quality, of the optometric care provided and deserves explicit attention.

*"Future optometric health professionals need an opportunity to confront the range of demands, the potential rewards, frustrations and limitations of 'real world' community-based health care."*

*Personal Development.* Several possible and highly appropriate goals for instruction provided by optometric practitioners relate to the definition, orientation, and emergence of the actual identity and personal functioning of the student preparing for an optometric career. Part of the purpose of the exposure to a practicing professional is to provide the opportunity to sample the stresses and rewards of such a career, and the life style associated with it. These are central issues in personal career definition and deserve being given explicit time and attention in the instructional format. Intended or not, the personal life style of the optometric practitioner, both in his approach to professional responsibilities and his conduct in private life, is evident to the student and can serve as either a positive or negative model. It is reasonable, therefore, for the practitioner to reflect upon these issues and give them important consideration both to enhance learning and to avoid misconceptions and misunderstandings.

*Professional Manner.* As with personal life style, the practitioner's manner of meeting his or her professional responsibilities is vividly evident to the student and can be a potent force in the development of the student's own professional style. Such issues as openness to critical evaluation from one's self and others, strength of commitment to continuing learning, quality of relationship with patients and colleagues, and other issues can have a substantially positive or negative impact upon the student and deserve deliberate attention by the optometric practitioner to help assure that the educational potential is realized.

While the above may not encompass all possible goals that an individual optometric practitioner may have for his or her work with students, it probably does embrace most that practitioners might reasonably expect to pursue. It is probably a more comprehensive array of goals than might ordinarily be pursued and may serve as a rough reference point against which one's own plans can be checked for adequacy. One of the problems in educational planning is a tendency to limit one's effort to those things traditionally regarded as the acceptable domain for optometric education and to omit some of the issues noted above. These actually would be more important than those usually included.

## Methods

The specific instructional techniques most likely to be utilized by optometric practitioner-instructors when working with students are fairly new. Most prominent would be: demonstration and explanation, individual supervision, modeling, and small-group leadership. Each of these, in turn, would be used in a somewhat circumscribed fashion.

For the most part, the demonstrations given, the explanations offered and the

modeling provided would be related to the day-to-day activities in which the practitioner is engaged, whether or not there are students present. Probably the optometric practitioners would not have to make any substantial deviation from their accustomed style of functioning for purposes of providing these forms of instruction. The main deviations are the extra time that would have to be allowed[7] and the delegation of patient-care responsibility to the student.[8] Demonstrations, explanations and modeling shoehorned into an otherwise hectic schedule do not provide for the exchange of views, evaluation, or the feedback that are all vital to quality learning. Modeling demonstrations, while most important to exposing students to the ways in which practitioners work and learn, must be balanced with opportunities for the students to practice these skills themselves.

The conduct of individual supervision and small-group leadership requires both time and specific abilities. Serving as an instructor of students carries an obligation to develop and continuously refine one's abilities to utilize these techniques effectively. As will be expanded upon below, programs will have to be developed to assist optometric practitioners in this process. In their absence, for the present, many practitioners will have to do the best they can virtually on their own.

The most effective approach to continuing learning by one's own teaching is soliciting the assistance of one's own students. Once convinced that a teacher genuinely wants to improve his or her teaching and that constructive criticism will be welcomed rather than penalized, students can be enormously helpful through the advice they can give, the reactions they can share, and the alternatives they can propose.

## Requirements

As is evident from all of the foregoing discussion, the provision of effective instruction for students should be regarded as a substantial undertaking, requiring considerable effort and resources. The optometric practitioner must be expected to make at least three kinds of contributions, and the parent optometric institution to which the practitioner is making a contribution can be expected to make at least three kinds of contributions in turn.

It is reasonable to expect that the optometric practitioner's investment will be in terms of: preparation for the instructional tasks; time devoted both to the preparation for and the implementation of the instruction; and the provision of a setting with facilities appropriate for the instruction offered. The preparation to be undertaken involves both the activities that will contribute to the evaluation of each's own competence as an instructor and the planning activities that should be associated with any instructional tasks. These categories of effort require time, as does the process of absorbing one or more students into the activities in which the practitioner is otherwise engaged.[9]

In addition to time and preparation, effective instruction demands the availability of an appropriate setting with certain facilities. At the very least, space should be available for the planned and unplanned private discussions that will occur. Simple videotape equipment can be most helpful if the instruction involves the practice and acquisition of complex clinical skills. It is also desirable for the student to have a desk or a table at which to write and review reference material as well as self-instructional packages—activities at which students should engage on an intermittent basis. While none of these facilities should be regarded as mandatory, they are sufficiently desirable to be appropriately considered as goals toward which an optometric practitioner might move as part of his or her continuing responsibility for instructing students. A subcategory of "facilities" required for teaching is the availability of patients, both for observation and interaction. Richardson's study[10] shows that barely one in twenty patients declines permission for such participation and is consistent with the general experience of many medical practitioners who themselves are comfortable with the presence of students.

The provision of the three categories of contribution summarized above can place a considerable burden on the optometric practitioner. It would be only reasonable, therefore, to expect that the sponsoring optometric educational institution in turn meet certain responsibilities to fulfill its areas of obligation. These are the important areas of credibility, support and reward. Among the educational miscarriages of the past has been the assignment of students to community optometric practitioners who were then actively discredited and demeaned by the full-time faculty who arranged for the students to be assigned there in the first place. There must be an unequivocal commitment on the part of the sponsoring optometric institution to the importance of the optometric practitioner-instructors in the program, and explicit steps must be taken to confirm their credibility as contributors to the student's education.

The institution has the obligation also to provide a variety of forms of support to the practitioner-instructors. These should include, where possible, workshops, seminars and other activities to enhance the instructional skills of the practitioners; instructional materials that can be used by the practitioners to increase their contributions; equipment for display of these materials; and even books for a small reference library.

Finally, the educational institution has the obligation to reward the contributing practitioners appropriately. Ultimately, this reward should be tangible, not just in terms of titles and recognition, necessary and appropriate though they are. Reward only can be provided tangibly in the form of continuing education activities, relief from practice through the provision of occasional substitutes, and, as an idea, the establishment of a charge account at the sponsoring institution's bookstore.

A limited number of schools now have had some experience to confirm the assertion that a substantial number of highly capable practitioners are willing and able to make generous high quality contributions to an institution's educational program.

This assertion is based on the provision that the sponsoring institution fulfill its half of the bargain by attending to the three requirements just noted. □

## References


1. Bloomfield DK: A role for practicing physicians in basic medical science education. *JAMA* 221:187-188, 1972.
2. Burrell D: The place of the general practitioners in the district hospital. *Proc Royal Soc Med* 64: 517-523, 1971.
3. Cambell EB: The nurse specialist: catalyst for reuniting service and education. *Hosp Prog* 52: 86-90, 1971.
4. Jason H: The relevance of medical education to medical practice. *JAMA* 212: 2092-2095, 1970.
5. MacLeod GK: Linkage of a teaching medical center to a multispecialty group practice. *J Med Educ* 45: 225-231, 1970.
6. American Medical Association: Medical School Alumni, 1967. American Medical Association, Dept of Survey Research, Chicago, Il, 1969.
7. Richards JG: Teaching in general practice, *New Zealand Med J* 73: 292-295, 1971.
8. Rezler AG et al: Medical clerkship in five different settings. *Brit J Med Educ* 4: 130-137, 1970.
9. Haggerty RJ: The academic health center and health care delivery; preparing personnel to meet the demand. *J Med Educ* 46: 3-10, 1971.
10. Richardson IM: Patients and students in general practice. *J Royal College Gen Pract* 20: 285-287, 1970.

# ABSTRACTS

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**Retrolental Fibroplasia: Efficacy of Vitamin E in a Double Blind Clinical Study of Preterm Infants.** Hittner, H.M., et al. *N. Eng. J. Med.* 305: 1365-1371, 1981.

The epidemiology, history, and pathophysiology of Retrolental Fibroplasia are discussed here at great length and in great detail, but with excellent clarity. Also described in excellent detail is the process of investigation and conclusions of a controlled clinical study of this disease which at one time was of great importance in low vision optometric care. There is the caution that it is liable to appear in significant numbers again due to the increased survival rates of ever more premature infants unless preventives as described can be administered in timely fashion and even then will result in an increase in grade I RLF. These youngsters will be rehabilitable and will likely appear in practitioners' offices in the next three to five years. Optometry graduates should be able to deal with them.

**External Examinations for the Evaluation of Medical Education Achievement and for Licensure.** Appendix to *J. Med. Ed.* 56(11): 933-962, 1981.

With credentialing in question in optometry, revisions in exam content, questions being raised concerning the relationships between schools and examining bodies, the details of the problems in medicine should be of interest to optometry and especially to optometric educators. This rather lengthy appendix in several parts outlines the AAMC position last year and the reasons for the change in that position. The section addresses the role of the school in continuing assessment of its students, ultimately leading to graduation, and the responsibility of the school to advance and promote only qualified students. It reemphasizes the function of a national exam as only one part of an assessment process necessary but not sufficient to qualify graduates of a professional curriculum.

**Medical Student Research: A Program of Self Education.** Fisher, W.R. *J. Med. Ed.* 56(11): 904-908, 1981.

This is another article dealing with the problem of teaching students how to learn relatively independently, a process that professionals must "practice" and that, indeed, gives the name "practice" to the pursuit of the arts and the professions, health and otherwise.

The article, by a member of the Gainesville, Florida, medical faculty deals with research as an *educational* experience whose outcome was not an increase in the number of professional researchers but rather clinicians better trained in independent study and discovery learning. It taught logical thinking, independent study, and utilization of resources. The research experience concentrated the students' efforts at the higher cognitive levels, efforts often not called for in the traditional classroom environment.

**Current Concepts in Psychiatry: Conversion Symptoms.** Lazare, A. *N. Eng. J. Med.* 305(13): 745-748, 1981.

As health practitioners dealing with patients whose symptoms are not generally associated with identifiable lesions, we and our patients would benefit from an ability to make a correct judgment of the presence of conversion symptoms. Lazare presents as clear a picture of a fuzzy disorder as one can, including diagnostic signs and symptoms. It is intended for the general health community rather than for an audience of psychiatrists and deals with a psychiatric disorder that demands good diagnostic skills by the non-psychiatrist as a requisite for the diagnosis. This, plus the relatively high incidence of eye complaints by these patients, should make this profitable and interesting reading. It also should emphasize the need for education about the "whole" patient, drawing from the knowledge of other disciplines such as psychology and psychiatry, for the optometrist if he or she is to be a primary care resource.

**Sounding Board—Can the Education of the Physician Be Made More Rational?** Ebert, R.H. *N. Eng. J. Med.* 305: 1343-1346, 1981.

The author expresses criticism of the typical medical school experience in terms of student attitudes, economics, and its relationship to undergraduate studies and the undergraduate years. He then does what many fail to do—he suggests concrete modifications including earlier introduction to clinical matters (and hence identification with the "doctoring" role). What is perhaps most worthy of note is that this is not just a rearrangement or acceleration of the conventional curriculum but a change in the process that should provide more than lip service to problems of modern medical (health professions) education. There also may be tucked in here a way of addressing our runaway costs while still allowing health professionals a broad humanistic education.

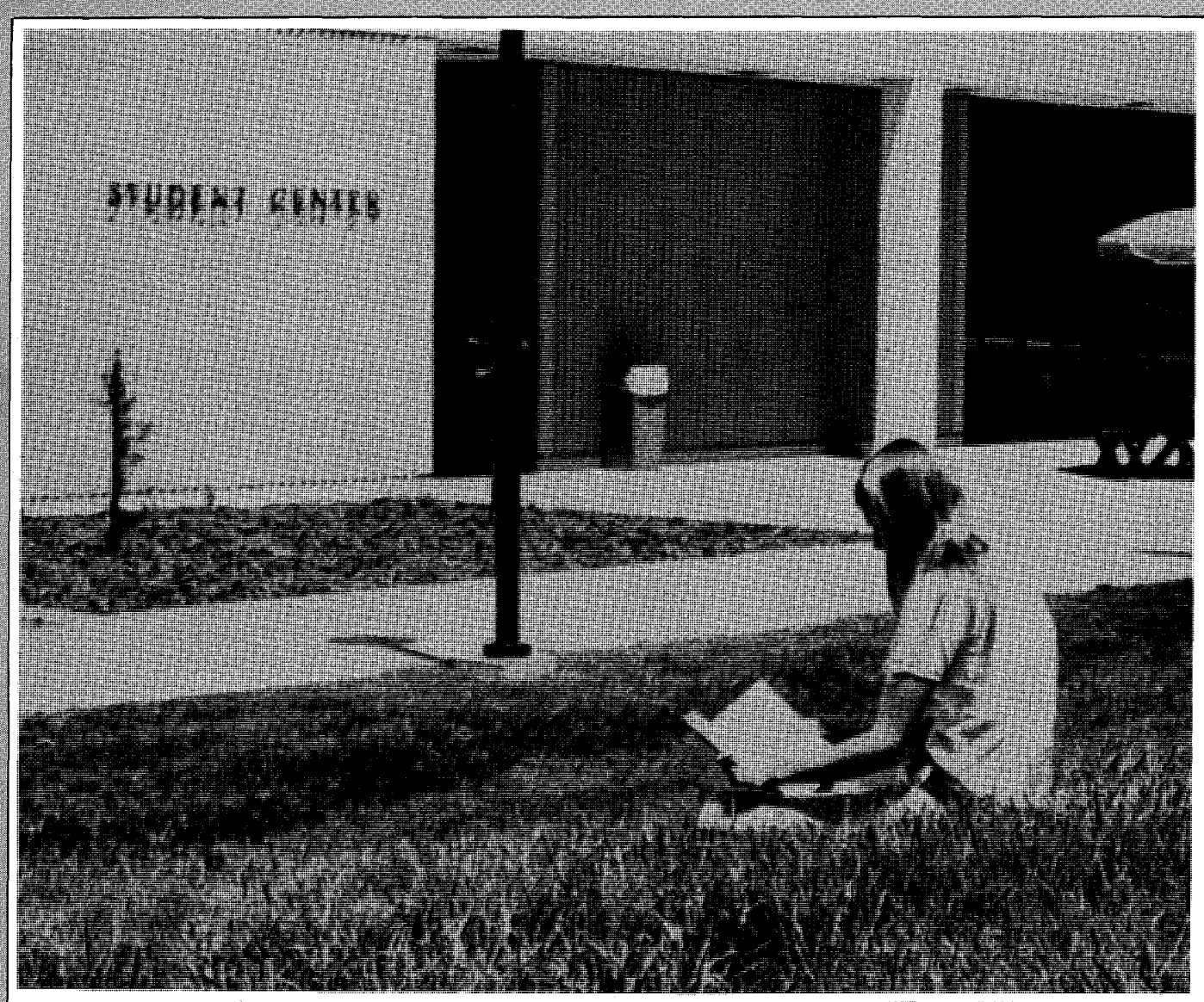
**Toward Independent Learning: Curricular Design for Assisting Students to Learn How to Learn.** Neame, R.L..B., and D.A. Powers. *J. Med. Ed.* 56(11): 886-893, 1981.

The authors are faculty members at the University of Newcastle, New South Wales, Australia, and describe their attempt to come to grips with the problem of continuing education at the undergraduate rather than the postgraduate level. The article and its references describe in some generality how they are going about the accomplishment of the title of this article. There is also great value, however, in a rather careful group of statements that describe the intellectual challenges with which a clinician must deal in everyday practice. It is to these challenges that professional education must address itself rather than simply to the systematic accumulation of factual knowledge (cognitive levels 1 and 2). They also identify a serious concern of all educators—assessment and its role in education as both a motivating and evaluating force.

# Annual Survey of Optometric Educational Institutions 1980-81

*The following is a summary of portions of the 1980-81* Annual Survey of Optometric Educational Institutions. *This survey is conducted on an annual basis by the Council on Optometric Education of the American Optometric Association, the official accrediting body in optometry.*

*The accompanying tables highlight information on student enrollment, academic achievement, financial aid and student expenditures for the academic year 1980-81. This report is published as an annual feature of JOE.*



## Student Enrollment

Total student enrollment tor the academic year 1980-81 was 4,540. This represented an increase of less than 1% (.88%) over the previous year's enrollment of 4,500. First-year students totaled 1,174. This represented a .93% decline from the previous year's 1,185.

Female enrollment jumped 13.5% to 985 students in 1980-81 from 868 in 1979-80, and women represented 21.7% of the total enrollment. A little more than one-quarter (25.3% or 297 students) of the entering class in 1980-81 was women, compared to 23% or 271 students in 1979-80. This represented an increase of close to 10% (9.6%).

Minority enrollment accounted for 9.52% of the student body in 1980-81, compared to 8.78% in 1979-80. This represented an increase of 9.4% and topped the highest percentage of 8.9% (346 students) of the student body recorded in 1975-76. This year's increase in minority enrollment was fairly consistent with that reported in 1979-80 in which the number had increased by 10% from 358 students in 1978-79 to 395 students in 1979-80.

Women accounted for 36.3% (157 students) of minority enrollment in 1980-81, compared to 37% in 1979-80. Of minorities enrolled, 13% were Black American, 18.5% Spanish surname, 3% native American Indian, 56% Asian American, and 9% foreign nationals.

## Academic Achievement

Nearly three-fourths of the entering class in 1980-81, 73.5% or 859 students, had four or more years of prior college work before entering optometry school. The majority of the first-year class, 66% or 773 students, had a baccalaureate or higher degree, and 7.4% had 4+ years of prior college work. The number of entering students having four or more years of college declined in 1980-81 by .8% from the previous year's total of 866 (73% of the entering class); however, the number of students having a baccalaureate or higher degree increased by 1.3% from 1979-80's total of 763 students (65% of the entering class).

Of the remaining first-year students, 7.5% had 2+ years of prior college work, and 19% had 3+ years.

The mean grade point average for entering students in 1980-81 declined to 3.28 from 3.31 in 1979-80. Twelve of the thirteen institutions included in the survey had mean grade point averages of 3.0 or better, and eight of the institutions had mean grade point averages of 3.25 or better. Two additional institutions not included in the survey reported mean grade point averages of 3.10 and 3.28. These grade point averages are based on a total of 1,164 entering students reported in *Information for Applicants to Schools and Colleges of Optometry, Fall, 1982,* published by the American Optometric Association in cooperation with the Association of Schools and Colleges of Optometry.*

## Financial Aid

The amount of aid granted through institutions other than loans** for the academic year 1980-81 was $1,476,539. This amount increased 2.7% over the previous year's total of $1,437,383. The federal share of aid excluding loans amounted to 49% or $724,515 while the state share of aid was 43% or $637,126. A dramatic increase in the federal share of aid occurred of more than 100% (108.4%) over 1979-80's share of $347,719, while the state share of aid increased by only 13.1% over 1979-80's $563,130.

The total dollar amount of loans granted through institutions in 1980-81 was $10,088,580. This represented an increase of 4.2% over 1979-80's total of $9,681,717. Of the total, 77.8% or $7,844,533 came from federal sources creating an increase of 102.8% over 1979-80's share of $3,868,912.

## Student Expenditures

Annual student expenditures for tuition, fees, books, supplies, and other costs excluding living expenses ranged from $1,575 to $4,650 for residents and $3,439 to $9,120 for non-residents in 1980-81. If no distinction was made between residents and non-residents at a given institution, expenditures were reported in the non-resident column only. The mean average expenditure for costs other than room and board was $3,474 for residents and $5,829 for non-residents. These represented increases of 7.1% and 7.4% over the 1979-80 mean costs of $3,243 and $5,428 for residents and non-residents, respectively.

The average expenditures for room and board in 1980-81 ranged from $1,750 to $5,000. The mean average expenditure was $2,882. This represented an increase of 13.7% over the previous year's $2,534.

Taken altogether, the mean average cost of education for an optometry student in 1980-81 totaled $6,356 for residents and $8,711 for non-residents. These represented increases of 10% and 9.4%, respectively, over the costs of $5,777 and $7,962 in 1979-80. □

*Information for Applicants to Schools and Colleges of Optometry, Fall, 1982.* St. Louis, Missouri: American Optometric Association. No explanation can be given for the discrepancy in numbers of first-year students reported in this booklet and the COE Annual Survey of Optometric Educational Institutions.

**Includes scholarships, fellowships, grants in aid, etc.

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The following abbreviations have been used in the accompanying tables.

**Schools**

| | |
|---|---|
| FSC | — Ferris State College |
| ICO | — Illinois College of Optometry |
| IU | — Indiana University |
| NECO | — New England College of Optometry |
| PU | — Pacific University |
| PCO | — Pennsylvania College of Optometry |
| SCCO | — Southern California College of Optometry |
| SCO | — Southern College of Optometry |
| SUNY | — State University of New York |

(continued from page 23)

TOSU — The Ohio State University
UAB — University of Alabama in Birmingham
UCB — University of California, Berkeley
UH — University of Houston

**Provinces and Territories**

CZ — Canal Zone
PR — Puerto Rico
USP — U.S. Possessions
ALB — Alberta
BC — British Columbia
MAN — Manitoba
NB — New Brunswick
NF — Newfoundland
NS — Nova Scotia
ONT — Ontario
PEI — Prince Edward Island
QUE — Quebec
SAS — Saskatchewan
CAN.TER. — Canadian Territories
O.COUN. — Other Countries

## Profile of 1980 Entering Class

### Grade Point Averages (4.0 Scale)

| | High | Low | Mean | Number of Students |
|---|---|---|---|---|
| FSC | N/A | N/A | 3.48 | 32 |
| ICO | N/A | N/A | 3.24 | 155 |
| IU | N/A | N/A | 3.45 | 69 |
| NECO | 3.80 | 2.50 | 3.12 | 89 |
| PCO | 3.82 | 2.53 | 3.12 | 150 |
| PU | 4.00 | 2.33 | 3.27 | 85 |
| SCCO | 4.00 | 2.80 | 3.32 | 96 |
| SCO | 4.00 | 2.09 | 2.89 | 150 |
| SUNY | 3.90 | 2.95 | 3.38 | 68 |
| TOSU | 3.98 | 2.94 | 3.46 | 60 |
| UAB | 3.68 | 2.87 | 3.27 | 40 |
| UCB | 4.00 | 2.43 | 3.44 | 69 |
| UH | 3.85 | 2.47 | 3.21 | 101 |
| TOTAL | | | 3.28 | 1164 |

SOURCE: *Information for Applicants to Schools and Colleges of Optometry, Fall, 1982. St. Louis, Mo: American Optometric Association.*

*N/A—Not Available*

## 1980-81 Annual Survey of Optometric Educational Institutions

### Number of First Year Students Enrolled with:

| | 2+ Yrs. | 3+ Yrs. | 4+ Yrs. | B.A., B.S. | M.A., M.S. | Ph.D. | TOTAL |
|---|---|---|---|---|---|---|---|
| FSC | 13 | 7 | 5 | 6 | 1 | | 32 |
| ICO | 4 | 34 | 12 | 101 | 3 | | 154 |
| IU | 20 | 20 | 4 | 24 | 1 | | 69 |
| NECO | | | 5 | 82 | | 9 | 96 |
| PCO | | 7 | 1 | 136 | 7 | 1 | 152 |
| PU | 9 | 24 | 16 | 33 | 3 | | 85 |
| SCCO | 6 | 9 | 14 | 64 | 3 | | 96 |
| SCO | 16 | 22 | 22 | 89 | 1 | | 150 |
| SUNY | | 4 | | 62 | 2 | | 68 |
| TOSU | 11 | 27 | 6 | 15 | | 1 | 60 |
| UAB | | 2 | 1 | 36 | 1 | | 40 |
| UCB | | 33 | | 34 | 2 | | 69 |
| UH | 9 | 33 | | 46 | 10 | | 98 |
| U.S. TOTALS | 88 | 222 | 86 | 728 | 34 | 11 | 1169 |

## 1980-81 Annual Survey of Optometric Educational Institutions

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

| | First Year | | Second Year | | Third Year | | Fourth Year | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Total |
| FSC | 27 | 5 | 24 | 8 | 27 | 3 | 22 | 3 | 100 | 19 | 119 |
| ICO | 134 | 22 | 126 | 27 | 129 | 22 | 118 | 20 | 507 | 91 | 598 |
| IU | 44 | 26 | 48 | 21 | 45 | 21 | 43 | 18 | 180 | 86 | 266 |
| NECO | 66 | 32 | 61 | 20 | 63 | 26 | 72 | 19 | 262 | 97 | 359 |
| PCO | 112 | 38 | 124 | 29 | 107 | 28 | 125 | 23 | 468 | 118 | 586 |
| PU | 68 | 17 | 66 | 19 | 64 | 17 | 62 | 21 | 260 | 74 | 334 |
| SCCO | 69 | 27 | 70 | 23 | 69 | 19 | 69 | 21 | 277 | 90 | 367 |
| SCO | 134 | 19 | 124 | 23 | 126 | 7 | 143 | 6 | 527 | 55 | 582 |
| SUNY | 38 | 28 | 46 | 20 | 49 | 19 | 36 | 22 | 169 | 89 | 258 |
| TOSU | 45 | 15 | 46 | 13 | 45 | 13 | 48 | 8 | 184 | 49 | 233 |
| UAB | 25 | 15 | 32 | 11 | 31 | 7 | 27 | 13 | 115 | 46 | 161 |
| UCB | 43 | 27 | 49 | 18 | 54 | 18 | 48 | 11 | 194 | 74 | 268 |
| UH | 72 | 26 | 81 | 27 | 80 | 25 | 79 | 19 | 312 | 97 | 409 |
| U.S. TOTALS | 877 | 297 | 897 | 259 | 889 | 225 | 892 | 204 | 3555 | 985 | 4540 |

## 1980-81 Annual Survey of Optometric Educational Institutions

### Minority Group Students Enrolled

| | Black American | | Spanish Surname | | Native American Ind. | | Asian Amer. | | Foreign Nationals | | TOTALS | | | % of Student |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Total | body |
| FSC | 2 | 1 | | | | | 1 | | | | 3 | 1 | 4 | 3.36 |
| ICO | | 3 | 3 | | | | 19 | 7 | 2 | | 24 | 10 | 34 | 5.69 |
| IU | 3 | 5 | 4 | 2 | | 2 | 2 | 2 | 4 | 1 | 13 | 12 | 25 | 9.40 |
| NECO | 2 | | | 3 | | | 5 | 1 | 3 | 2 | 10 | 6 | 16 | 4.46 |
| PCO | 3 | 7 | 6 | 3 | | | 9 | 9 | 2 | | 20 | 19 | 39 | 6.66 |
| PU | 1 | | 4 | 1 | 1 | 1 | 28 | 13 | | 2 | 34 | 17 | 51 | 15.27 |
| SCCO | 3 | 1 | 10 | 3 | 2 | | 25 | 17 | 1 | 1 | 41 | 22 | 63 | 17.17 |
| SCO | 4 | 2 | 2 | | | | 9 | 1 | 1 | 1 | 16 | 4 | 20 | 3.44 |
| SUNY | 3 | | 2 | 2 | | | 3 | 7 | | 1 | 8 | 10 | 18 | 6.98 |
| TOSU | | 2 | | | | | 1 | | | | 1 | 2 | 3 | 1.29 |
| UAB | 3 | 3 | | | | | | 1 | | | 3 | 4 | 7 | 4.35 |
| UCB | 1 | 4 | 12 | 2 | | 1 | 43 | 25 | 1 | | 57 | 32 | 89 | 33.21 |
| UH | 3 | 1 | 16 | 5 | 4 | 1 | 9 | 6 | 13 | 5 | 45 | 18 | 63 | 15.40 |
| U.S. TOTALS | 28 | 29 | 59 | 21 | 7 | 5 | 154 | 89 | 27 | 13 | 275 | 157 | 432 | 9.52 |

# 1980-81 Annual Survey of Optometric Educational Institutions

| | Financial Aid Granted Through Institutions Excluding Loans | | | | | | | Student Loans Granted through Institutions | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Percentage of Students Receiving Aid | | | | Amount | | | Percentage of Students Receiving Loans | | | | Amount | |
| | 1st Year | 2nd Year | 3rd Year | 4th Year | Total | Federal | State | 1st Year | 2nd Year | 3rd Year | 4th Year | Total | Federal |
| FSC | 15 | 29 | 20 | 36 | $ 43,416 | $ 22,717 | $ 20,699 | 73 | 87 | 60 | 72 | $ 327,269 | $ 86,666 |
| ICO | 7 | 4 | 3 | 3 | 181,630 | 119,529 | 41,003 | 74 | 78 | 60 | 74 | 2,438,222 | 2,436,222 |
| IU | 1 | 1 | 1 | 1 | 9,000 | 7,000 | | — — — NOT AVAILABLE — — — | | | | | |
| NECO | 25 | 24 | 22 | 24 | 249,300 | 221,120 | 15,550 | 33 | 44 | 31 | 36 | 204,406 | 204,406 |
| PCO | 2 | 0 | 3 | 1 | 11,326 | 1,276 | 2,500 | 82 | 78 | 72 | 61 | 2,471,019 | 2,471,019 |
| PU | 19 | 20 | 1 | 5 | 46,313 | 39,087 | 1,908 | 65 | 60 | 64 | 60 | 898,306 | |
| SCCO | 53 | 67 | 48 | 50 | 617,197 | 218,791 | 392,986 | 80 | 89 | 77 | 76 | 1,621,551 | 1,605,251 |
| SCO | 0 | 0 | 0 | 0 | | | | 2 | 13 | 20 | 13 | 502,207* | 357,000 |
| SUNY | 10 | 25 | 25 | 40 | 186,000 | 10,000 | 156,000 | 75 | 60 | 65 | 85 | 615,700 | 57,000 |
| TOSU | 32 | 44 | 35 | 32 | 38,905 | 8,239 | | 22 | 20 | 19 | 26 | 145,023 | 83,550 |
| UAB | 3 | 8 | 3 | 3 | 24,216 | 14,000 | | 59 | 63 | 73 | 58 | 497,529 | 184,340 |
| UCB | 0 | 0 | 0 | 0 | | | | 21 | 8 | 42 | 16 | 75,173 | 66,904 |
| UH | 0 | 55 | 40 | 30 | 69,236 | 62,756 | 6,480 | 0 | 55 | 40 | 30 | 292,175 | 292,175 |
| U.S. TOTALS | | | | | $1,476,539 | $724,515 | $637,126 | | | | | $10,088,580 | $7,844,533 |

*Excludes $1,680,220 in Guaranteed Student Loans received by SCO students from private lenders for the 1979-80 year.

# 1980-81 Annual Survey of Optometric Educational Institutions

## Annual Student Expenditures

| | Resident Expenditures | | | | | Non-Resident Expenditures | | | | | Average Room & Board Expenditures |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Year | 2nd Year | 3rd Year | 4th Year | Average | 1st Year | 2nd Year | 3rd Year | 4th Year | Average | |
| FSC | $5,223 | $3,668 | $3,447 | $3,337 | $3,919 | $6,843 | $5,288 | $5,067 | $4,957 | $5,539 | $1,905 |
| ICO | | | | | | 7,110 | 6,370 | 5,680 | 6,235 | 6,349 | 2,380 |
| IU | 2,690 | 4,485 | 3,425 | 2,220 | 3,205 | 4,975 | 6,636 | 5,645 | 5,425 | 5,670 | 1,750 |
| NECO | | | | | | 6,100 | 4,850 | 4,670 | 4,620 | 5,060 | 5,000 |
| PCO | | | | | | 9,922 | 9,072 | 8,962 | 8,522 | 9,120 | 2,857 |
| PU | | | | | | 7,300 | 6,300 | 6,100 | 5,850 | 6,388 | 1,900 |
| SCCO | | | | | | 6,501 | 5,699 | 5,567 | 5,237 | 5,751 | 3,242 |
| SCO | 5,423 | 5,273 | 4,773 | 2,704 | 4,543 | 9,423 | 9,273 | 8,773 | 6,704 | 8,543 | 3,229 |
| SUNY | 4,190 | 4,090 | 3,790 | 3,490 | 3,890 | 5,700 | 5,600 | 5,300 | 5,000 | 5,400 | 3,600 |
| TOSU | 4,650 | 4,650 | 4,650 | 4,650 | 4,650 | 6,390 | 6,390 | 6,390 | 6,390 | 6,390 | 2,100 |
| UAB | 2,813 | 3,239 | 2,025 | 2,079 | 2,539 | 3,713 | 4,139 | 2,925 | 2,979 | 3,439 | 4,290 |
| UCB | 1,100 | 2,900 | 1,100 | 1,200 | 1,575 | 3,500 | 5,300 | 3,500 | 3,600 | 3,975 | 2,035 |
| UH | | | | | | 6,400 | 3,400 | 3,400 | 3,400 | 4,150 | 3,175 |

# 1980-81 Annual Survey of Optometric Educational Institutions

## Permanent Residence

| | FSC | ICO | IU | NECO | PCO | PU | SCCO | SCO | SUNY | TOSU | UAB | UC | UH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | 1 | 1 | | | 102 | | | 104 |
| AK | | | | | | 4 | 1 | | | | | | | 5 |
| AZ | | 1 | | 2 | | 9 | 18 | 2 | | | | | | 32 |
| AR | | | | | 1 | | 1 | 33 | | | | | 17 | 52 |
| CA | | 33 | 6 | 8 | 14 | 41 | 134 | 7 | 4 | | | 238 | 1 | 486 |
| CO | | 2 | 1 | | 1 | 22 | 16 | 4 | | | | 2 | | 48 |
| CT | | 4 | 1 | 3 | 7 | | 3 | 2 | 3 | | | | | 59 |
| DE | | | | | 8 | | 1 | 3 | | | | | | 12 |
| DC | | | | | | | 1 | | | | | | | 1 |
| FL | | 13 | 5 | 11 | 3 | 4 | 11 | 60 | 1 | | | | 21 | 129 |
| GA | | 1 | 1 | 1 | 1 | | | 42 | | | 12 | | 1 | 59 |
| HI | | 4 | | | 2 | 22 | 10 | 1 | | | | 2 | | 41 |
| ID | | 3 | | | | 15 | 5 | | | | | 1 | 1 | 25 |
| IL | | 168 | 11 | 3 | 2 | | | 6 | 1 | | | 1 | 1 | 193 |
| IN | | 6 | 156 | | | | 1 | 3 | | | | | 2 | 168 |
| IA | | 47 | 6 | | | 6 | 14 | 3 | | | | | | 76 |
| KS | | | | | | | 2 | 15 | | | | | 24 | 41 |
| KY | | | | | | | 1 | 34 | | | 8 | | 20 | 63 |
| LA | | | | | | | 1 | 26 | | | 3 | | 39 | 69 |
| ME | | | | 23 | 4 | | | 3 | | | | 1 | | 31 |
| MD | | 10 | 3 | 3 | 44 | | 1 | 22 | 1 | | 8 | 1 | 4 | 97 |
| MA | | 4 | 2 | 141 | 11 | | | 4 | | | | 1 | | 163 |
| MI | 119 | 63 | 6 | 1 | 2 | 1 | 2 | 7 | | | | 2 | | 203 |
| MN | | 20 | 5 | 3 | 1 | 15 | 14 | 1 | | 7 | | | | 66 |
| MS | | | | | | | | 26 | | | 3 | | 7 | 36 |
| MO | | 9 | 6 | | | 2 | 11 | 7 | | | | | | 35 |
| MT | | | | | | 18 | 18 | | | | | | | 36 |
| NE | | 2 | 6 | | | 3 | 2 | 9 | | 12 | | | 17 | 51 |
| NV | | | | | | 8 | 14 | 2 | | | | | | 24 |
| NH | | 2 | | 9 | 1 | 1 | | 1 | | | | | | 14 |
| NJ | | 3 | 3 | 25 | 79 | 1 | 1 | 6 | 4 | | | 2 | | 124 |
| NM | | 1 | 1 | | | 5 | 7 | 1 | | | | | 14 | 29 |
| NY | | 69 | 6 | 45 | 53 | 6 | 1 | 7 | 241 | | | 7 | 2 | 437 |
| NC | | 1 | 1 | | 38 | | | 55 | | | 9 | | 7 | 111 |
| ND | | 7 | | | | 13 | 7 | 1 | | 4 | | | | 32 |
| OH | | 22 | 2 | 1 | 9 | 1 | | 6 | | 209 | | 3 | | 253 |
| OK | | 1 | 1 | | | | 3 | 24 | | | | | 15 | 44 |
| OR | | 1 | | | | 43 | 8 | | | | | 1 | | 53 |
| PA | | 24 | 3 | 7 | 245 | | | 7 | 3 | | | | | 289 |
| RI | | | 1 | 17 | 1 | | 1 | 1 | | | | | | 21 |
| SC | | 1 | 1 | 1 | 1 | | | 30 | | | 8 | | | 42 |
| SD | | 9 | 1 | 1 | | 8 | 10 | 1 | | | | | | 30 |
| TN | | | 1 | 1 | 1 | 2 | | 74 | | | | | | 79 |
| TX | | 4 | 1 | | | | | 2 | | | | | 202 | 209 |
| UT | | 3 | | | | 13 | 14 | 3 | | | | | 1 | 34 |
| VT | | | | 6 | | | 1 | 1 | 1 | | | | | 9 |
| VA | | | 1 | 3 | 38 | | | 12 | | | 8 | | | 62 |
| WA | | 1 | | | | 50 | 8 | 1 | | | | 1 | | 61 |
| WV | | 8 | | 2 | 12 | | | 17 | 1 | 1 | | | | 41 |
| WI | | 50 | 23 | 1 | 1 | 9 | 13 | 6 | | | | 3 | | 106 |
| WY | | | | | | 6 | 8 | | | | | | | 14 |
| CZ | | | | | | | | | | | | | | |
| PR | | | | 2 | 4 | | 1 | 1 | | | | | | 8 |
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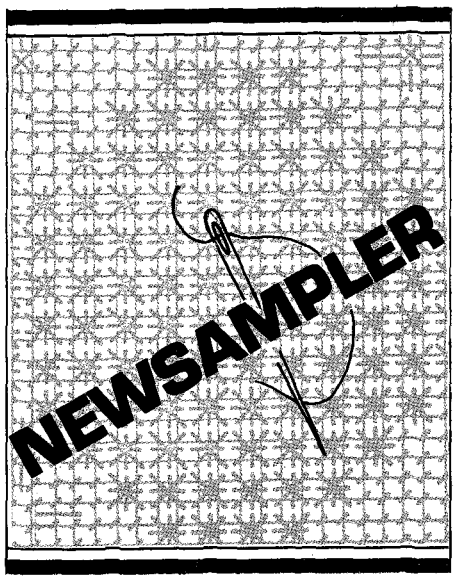
| CAN.TER. | | | | | | | | | | | | | 2 | 2 |
| O.COUN. | | 1 | 5 | | 2 | 4 | 1 | 2 | | | | 2 | 11 | 28 |
| TOTAL | 119 | 598 | 266 | 358 | 586 | 334 | 367 | 582 | 261 | 233 | 161 | 268 | 409 | 4542 |




### APHA Adopts Vision Care Resolutions

At the 109th Annual Meeting of the American Public Health Association held in Los Angeles in November, two resolutions proposed by the Vision Care Section were adopted. One supports a policy of maximum utilization of health care providers, freedom of choice and equitable research support allocations. The second deals with interprofessional cooperation in hypertension programs.

The first resolution, "Vision Care Manpower Utilization," recommends three actions: (1) that future legislation and regulations concerning health professions education funding consider utilization of all health providers at their maximum level of skill in determining manpower needs; (2) that existing policies in health care programs and regulatory actions which prevent selection of nonphysician health providers for covered health care services within their licensure be removed; and (3) that federal and state policies governing funding of health care research be brought into line with federal manpower needs.

The second resolution, "Inter-Professional Cooperation in High Blood Pressure Control," encourages the cooperation of all health care providers, professional societies and schools in interdisciplinary hypertension programs which aid in the detection and control of high blood pressure.

The Vision Care Section of APHA presently is developing an implementation plan for these resolutions.

### Banwell Appointed to ICO Presidency

During the January 27 meeting of the Executive Committee of the Illinois College of Optometry (ICO) Board of Trustees, a unanimous recommendation was received from the Presidential Search/Screening Committee to appoint Dr. Boyd B. Banwell as the new president of the Illinois College of Optometry. Dr. Banwell's appointment becomes effective July 1, 1982, subject to ratification by the entire ICO Board of Trustees at its regularly scheduled meeting May 17, 1982.

Dr. Banwell is a graduate of the Northern Illinois College of Optometry and has practiced in Williamston, Michigan, for 28 years.

The Search/Screening Committee, chaired by Dr. W. Judd Chapman, received a number of applications and independently selected four candidates to interview. The committee, which included representatives from the ICO staff, student body, faculty, alumni association and Board of Trustees, then made its recommendation to the executive committee.

### ICO Creates First Distinguished Professorship

The Illinois College of Optometry (ICO) has created optometric education's first distinguished professorship.

Dr. Alfred A. Rosenbloom, who recently resigned the ICO presidency after ten years, has been designated ICO's first Distinguished Professor of Optometry. Dr. Rosenbloom was chosen because of his 33 years of service to ICO and optometry as an educator, administrator, author and researcher.

A candidate for the rank of Distinguished Professor must have achieved the rank of full professor at ICO or its equivalent. In addition, the candidate must have demonstrated excellence in teaching with a clear application to the broad concerns of human values and issues; must have national or international recognition in his academic field or area of performance, a sustained record of achievement at the highest professional and scholarly level, and a record of service to the college or the wider community which the college serves.

Nominations for the rank of Distinguished Professor may be submitted from any source within or without the college.

### Former UCB Dean Hirsch Dies

The optometric education community was profoundly saddened to learn of the death of Dr. Monroe J. Hirsch, former dean of the School of Optometry, University of California, Berkeley (UCB), on Sunday, January 24.

Dr. Hirsch was a valued colleague and had contributed greatly to the optometric profession, particularly optometric education. He came to the Los Angeles College of Optometry, now the Southern California College of Optometry (SCCO), in 1948 from the Ohio State University and served as associate professor of optometry in charge of postgraduate education and research.

In 1951, Dr. Hirsch was promoted to professor of optometry at SCCO and remained with the college until 1954. Later, he served as dean of the School of Optometry at UCB until his retirement in 1978.

### UMSL Begins $500,000 Renovation Project

A $500,000 renovation project scheduled to begin at the University of Missouri-St. Louis (UMSL) School of Optometry in January should be providing eye examinations for area residents by summer, 1982, depending on the progress of work.

The remodeling will provide space for internal teaching and specialty clinics as well as faculty offices to accommodate six more instructors, research space and administration offices.

Three specialty clinics will open later in the year. One will be for contact lenses, another for binocular vision treatment of people with eye coordination problems and a low vision clinic for people who are partially sighted.

The school also will have an electrodiagnostic clinic to detect an eye abnormality before it becomes physically obvious.

The school plans to operate eye clinics off campus as well as at the Optometric Center of St. Louis and at two veterans' hospitals, Cochran in midtown and Jefferson Barracks in South St. Louis County.

### Student Aid Cuts Proposed

The Reagan Administration's Fiscal Year 1983 Budget has proposed massive cuts in federal student aid programs. If accepted, the proposed reductions would take effect in the 1983-84 academic year.

Three student aid programs would be eliminated entirely: Supplemental Educational Opportunity Grants, National Direct Student Loans and State Student Incentive Grants. In addition, major restrictions in the Guaranteed Student Loan program would remove graduate and professional students from guaranteed loan eligibility. College Work-Study funding also would be reduced 30 percent.

Other restrictions on the Guaranteed Student Loan program include doubling the origination fee charged on all new loans from 5 percent to 10 percent and requiring borrowers to pay market interest rates two years after entering repayment. Graduate and professional students would still be eligible for the new Auxiliary Loans to Assist Students (ALS) program—a loan program with a 14 percent interest rate and lacking the GSL program's in-school interest subsidy.

The administration also has proposed wiping out the Department of Education's Graduate and Professional Opportunities program which has provided fellowships for women and members of minority groups.

The basic rationale behind the reaction of higher education to the proposed cuts boils down to a simple premise: students need assistance to go to college and institutions need students to maintain operations. Further, this nation needs trained people if its economy is to be revitalized and its national defense strengthened.

The Association of Schools and Colleges of Optometry (ASCO) is working in close cooperation with the American Optometric Association, the American Council on Education and other organizations of higher education in an attempt to insure continued federal assistance for students in optometry schools.

## Keeping Up with People...

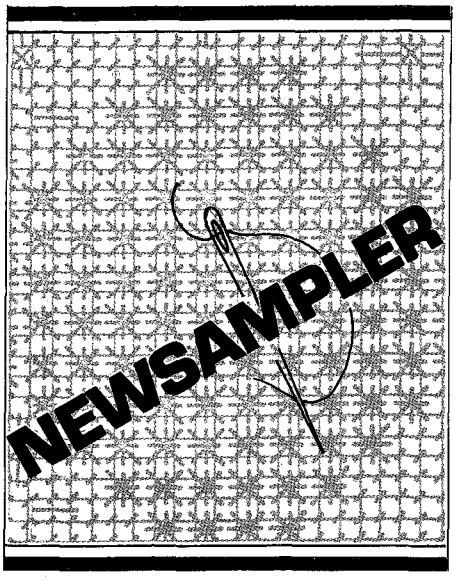
**Florence Springer,** chief psychologist of the State University of New York (SUNY), State College of Optometry's Learning Disabilities Unit, conducted an all-day institute on the "Differential Diagnosis of Learning in Children and Adults" at the 1981 annual meeting of the New York Branch of the Orton Society, Inc. Mrs. Springer presented a comprehensive model for evaluating children and adults who show symptoms of being learning disabled.

**Dr. Eleanor E. Faye,** adjunct professor at the SUNY State College of Optometry, was named co-recipient of the first annual Pisart Vision Award presented by the American Foundation for the Blind. The $15,000 award was developed to recognize annually men and women who have distinguished themselves "by invention or otherwise in the prevention, cure, treatment or care of blindness,"

**Drs. Bruce Rosenthal, Roy Cole, Charles Neu, David Horn** and **Jay Cohen** of SUNY Optometry's Low Vision Service joined forces with the Continuing Education staff of the Lighthouse for the Blind to present New York's first metropolitan/regional update in low vision. The meeting, held in November at the Lighthouse, was attended by area optometrists, ophthalmologists and selected faculty members from the Illinois College of Optometry.

**Drs. Robert Rosenberg** and **Bruce Rosenthal** of SUNY's Low Vision team spoke at the annual meeting of the Low Vision Clinical Society held in conjunction with the annual meeting of the American Academy of Ophthalmology in November. Dr. Rosenberg, nationally known for his work in low vision, discussed the "Properties of Filters and the Management of Glare" before an attentive group of optometrists and ophthalmologists. Dr. Rosenthal, chief of SUNY Optometry's Low Vision Service, served as moderator and commentator for the workshop. He used the occasion to demonstrate the new RCA Hemianopic Mirror and to introduce the new Honey bee lens to the scientific community.

Four Pacific University alumni returned from a People to People International trip to China for a professional exchange on vision care in January. They




# Keeping Up with People...

(continued)

were: **Dr. Treasure Wheeler** of Medford, Oregon; **Dr. Robert Bond** of White Rock, New Mexico; **Dr. Vincent White,** Los Angeles, California; and **Cindy Diederich,** wife of Scappose optometrist, **Dr. Paul Diederich.**

Fourteen fourth-year students from Southern College of Optometry have been selected for inclusion in the 1981-82 edition of *Who's Who Among Students in American Universities and Colleges.* They are: **John Robert Hammerer, Barry Lynn Harris, Jeffrey Carr Jessup, Cheryl Diann Johnson, Woodrow Wilson Justice, Thomas Glenn Justus, Gary Lee Mancil, Mary Ann Moore, Carolyn Mae Oppy, George Charles Stumpf, Dan Gankuln Tom, Timothy Elam Underhill, Richard Lynn Whittaker,** and **Johnny Lane York.**

Fourth-year optometry student **Mark E. Zagrod,** from the University of Alabama in Birmingham (UAB), School of Optometry, has been appointed to the National Advisory Council on Health Professions Education. The council advises the secretary of the Department of Health and Human Services on regulatory and policy questions concerning such health education matters as new construction, student loans and special projects. Zagrod is one of six new members of the council.

**Dr. Lester Caplan,** associate professor of optometry at UAB was elected to the Governing Council of the Vision Care Section of the American Public Health Association for a one-year term.

**Dr. Melvin D. Shipp,** assistant professor of optometry at UAB, was appointed to the FDA's Ophthalmic Devices Section of the Ophthalmic ENT and Dental Services Panel through October, 1983.

**Drs. Michael S. Loop** and **David R. Whikehart** of the Department of Physiological Optics at UAB, have been promoted to the rank of associate professor. Both are module directors for the school's Vision Science Research Center.

Among those honored at a formal Leadership Recognition Dinner sponsored by the Southern California College of Optometry (SCCO) and held at the Los Angeles Music Center were three past administrators of SCCO: **Charles A. Abel, O.D.; James F. English;** and **James R. Gregg, O.D.**

**Dr. David G. Kirschen,** assistant professor at SCCO, was invited to present seven lectures at the Binocular and Orthoptic Congress in South Africa in November. Dr. Kirschen discussed the diagnosis and treatment of binocular vision problems in conditions such as amblyopia, nystagmus, strabismus, and other visual problems that affect visual acuity.

SCCO has appointed three new members of the clinical faculty. Assigned to the primary care optometry service at the Optometric Center of Fullerton (OCF), the major teaching clinic of the college, is **Dr. Sam H. Hanlon** of Wichita, Kansas. Also at OCF in vision therapy is **Dr. Ralph H. Hutter** from Valley Stream, New York. **Dr. Jerry R. Paugh** will instruct in the contact lens service. Dr. Paugh earned an O.D. and master's degree from the Ohio State University, Columbus, Ohio.

The 1982 edition of *Who's Who Among Students in American Universities and Colleges* also will carry the names of twelve students from the Southern California College of Optometry. They are: **Robert E. Bauman, Donald J. Beilstein, David A. Bradley, Wiley F. Curtis, Gerald L. Dill, Beth D. Dubruyne, Robin O. Jackman, Steven W. Looysen, Dawn M. Miller, Leon F. Miller, William R. Pierre,** and **William P. Rochetti, Jr.**

**Dr. Bernard K. Rubin,** assistant professor at SCCO, was elected to chair the Vision Care Section of the American Public Health Association at its recent annual meeting in Los Angeles. In addition, Dr. Rubin was appointed to the Public Health Task Force of the American Optometric Association.

Named as the new director of alumni relations at SCCO is **Harold A. Snider, O.D.,** assistant professor and chief of primary care services at the Optometric Center of Fullerton. Dr. Snider practiced for 28 years in Kansas prior to his joining the SCCO faculty five years ago.

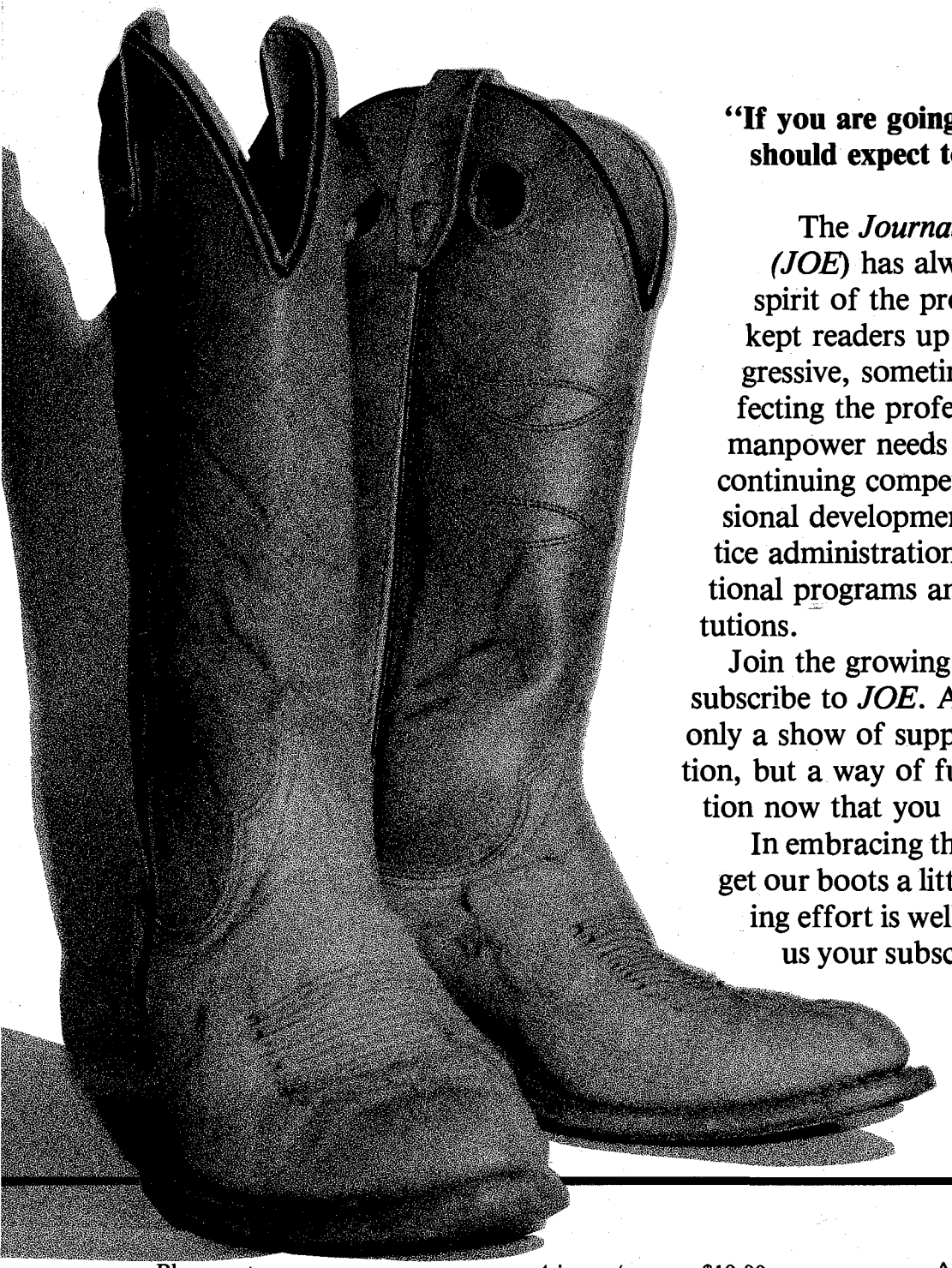
New faculty at the Illinois College of Optometry (ICO) beginning in fall, 1982, are **Dr. David Yiu-tung Lee,** assistant professor in the Division of Basic Sciences; **Dr. Dwight Haas,** assistant professor in the Division of Patient Care; and **Dr. Debbie Lynn Hettler,** instructor in the Division of Patient Care.

**Robert J. Neale,** of Cheektowaga, New York, assumed his duties in September, 1981, as the new financial aid coordinator at ICO. For the past three years, Neale worked as a financial aid counselor at Daemen College in Amherst, New York.

**John Duncan** joined the ICO staff in October, 1981, as recruitment officer. Duncan hopes to increase alumni participation in recruitment and educate guidance counselors to promote optometry when counseling.

Two fourth-year ICO students have been awarded grants from the Columbia Optical Supply Company and the Corning Glass Works Foundation. **Benjamin Poole,** of Gaffney, SC, received a $500 O.P. "Pete" Lyman, Jr. Scholarship through a grant from the Columbia Optical Supply Company of Columbia, SC. The award is given in honor of the firm's founder.

**Paul Levinson,** of Flushing, NY, received a $1,000 Corning Scholarship from the Corning Glass Works Foundation.



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