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**Special Issue: History of the
Indiana University School of Optometry, Part II**

In This Issue

The fall, 2003 issue of the journal was devoted to a history of the Indiana University Division of Optometry. The narrative covered the period from the first founding efforts in the 1940s and the first entering optometry class in 1953 to 1975 when the Division of Optometry became a School of Optometry. The present issue continues the history from the 1970s to the present. Some of the articles cover the entire period from the beginning of the school.

About a year ago, IU optometry faculty were given the opportunity to volunteer to write about aspects of the history of the School that they knew or wished to research. As you will see from the contents of this issue, a number of authors came forward with informative articles.

This issue could not have been possible without the assistance of numerous persons who responded to questions, answered email or telephone inquiries, reviewed manuscripts, provided data and information, picked out photographs, provided support and encouragement, assisted in gathering and locating information, etc. At the distinct risk of forgetting someone, thanks go to Mary Baker, Susan Boyd, Julia Broadstreet, Cliff Brooks, Gladys Chambers, Cris Coffey, Craig Combs, Bobby Cottingham, Joanne DeLone, Angela Dolan, Jack Downey, Doug Freeman, Ron Everson, Jeffrey Gerson, Dan Gerstman, Sue Gilmore, Diane Goss, Terri Greene, Gretchen Handlos, Patty Henderson, Suzanne Hickey, Doug Horner, Joe Jefferson, Elli Kollbaum, Pete Kollbaum, Cynthia Lepore, Gerald Lowther, Andrya Lowther, Don Lyon, Edwin Marshall, Jeff Marshall, Debra McConnaha, Richard Meetz, Marianne Miller, Lora Monix, Douglas Morrow, Jackie Olson, Ryan Palmer, Jeff Perotti, Merle Pickel, Deb Plass, Elizabeth Prescott, Bill Rainey, Jason Rich, Hubert Riley, Charles Shick, Bill Somers, Jerald Strickland, Brad Sutton, Khashayar Tonekaboni, Julie Torbit, Joyce Urbeck, Mary Van Hoy, Kevin Waltz, and Tracy Wirth.



Thanks also go to our authors. I'm sure that you will agree with me that their efforts have made for some interesting reading.

David A. Goss
Editor

This journal can also be found at <http://www.opt.indiana.edu/IndJOpt/home.html>

On the cover: The cover art was produced by Nadia R. Bianchi, a Fine Arts student at Indiana University as part of a class project for Graphic Design BFA Studio S452. This art was produced in poster form in the Fall of 2003 for the celebration of the 50th anniversary of the first entering optometry class at IU. Copies of the poster can be obtained by contacting the School of Optometry.

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Statement of Purpose: The Indiana Journal of Optometry is published by the Indiana University School of Optometry to provide members of the Indiana Optometric Association, Alumni of the Indiana University School of Optometry, and other interested persons with information on the research and clinical expertise at the Indiana University School of Optometry, and on new developments in optometry/vision care.

An Overview of Pivotal Events and Significant Changes in the Indiana University School of Optometry from the 1970s to the Present

by David A. Goss, O.D., Ph.D., Paul A. Pietsch, Ph.D., Daniel R. Gerstman, O.D., M.S., and Richard E. Meetz, O.D., M.S.

The Indiana University Division of Optometry was established in 1951 after a prolonged and difficult struggle of several years. The members of the first optometry class started their professional studies in 1953 and graduated in 1956. The fledgling school faced many challenges, but succeeded in developing a strong optometry curriculum, recruiting a talented faculty, creating an internationally known graduate program in physiological optics, and establishing a tradition of service to the optometric profession and to the community at large.¹ Construction of a new optometry building was completed in 1967. Previously, the optometry program had been dispersed among several buildings across the campus, some of which are no longer standing. After numerous efforts the IU Division of Optometry, administratively within the College of Arts and Sciences and the Graduate School, became a School of Optometry in 1975. The significance of the change to a School went beyond merely administrative and organizational benefits. Among other things, it helped to inform other segments of the campus that optometry is a learned profession, and that optometry courses had the same level of rigor as comparable subjects in other disciplines.



Gordon Heath

In discussing the transition from a Division to a School, Dean Gordon Heath stated, "The next twenty years will, I feel sure, bring changes at least as great as those of the past quarter century and we look forward with enthusiasm to continuing to develop this program to a level beyond the fondest dreams of our founding fathers."²

Heath's predictions were confirmed during the ensuing decades.

The purpose of this article is to provide a brief overview of some of the most significant changes in the IU School of Optometry from the 1970s to the present.

Expansion of Scope of Optometry and Changes in Curriculum

One salient change in optometry since the

1970s has been the expansion of the profession's scope. Since the beginnings of optometry, its core competency has been refraction and the clinical application of optics. Through the 20th century, optometrists added binocular vision testing, vision training, low vision care, and contact lens fitting to their list of skills. All of these areas have been in the IU Optometry curriculum since the beginning of the program.

Before 1970, optometrists were trained in the detection of eye disease and referred those cases that required treatment to medical personnel. In the 1970s, optometry's expansion in scope began to accelerate and encompass areas that were traditionally part of medicine, namely the use of diagnostic and therapeutic pharmaceutical agents.³ State legislatures began to enact laws that would first accommodate, and then require, more comprehensive ocular health services as part of optometric care. The expanded scope of practice aligned optometry more closely with other learned health professions and allowed optometrists to provide more comprehensive service to patients.

The expanded scope of optometry stimulated major modifications in the IU optometric curriculum. In 1970-71, the Ocular Pharmacology course was increased from one credit hour to two credit hours. The following year, three courses were added to the optometry curriculum: Ocular Microbiology, The Visual System: Neuroanatomy, and Cell Biology of the Visual System. In 1976-77, a one-credit-hour course, Cell Biology of the Visual System was replaced by a three-credit-hour course, Vegetative Ocular Physiology and Biochemistry.⁴ Three years later, in 1979-80, a course in Physical Diagnosis was added to the curriculum.

Ingeborg Schmidt, who received her M.D. degree in Germany, provided most of the didactic instruction in ocular pathology and pharmacology from the beginning of the IU optometry program to 1970, when she retired. In 1970, these duties were taken over mostly by Rosa I. Revuelta. Revuelta had practiced optometry in Cuba and, later earned an O.D. degree from Pacific University and an M.S. in physiological optics from

IU. Revuelta introduced updates in the ocular pathology and pharmacology instruction to make it current with the developments in optometry in the early 1970s. Revuelta left IU in 1976 to start a private practice in Florida.

Paul Pietsch, who earned a Ph.D. degree in anatomy and had taught medical and dental students at other universities, joined the IU optometry faculty in 1970. He introduced biomedical neuroanatomy and histology courses into the optometry curriculum. Another anatomist, Gary Hafner, joined the faculty in 1976. Hafner began teaching a professional level gross anatomy course, that included the use of human cadavers. Sarita Soni, who graduated from the IU optometry program in 1976 and joined the faculty



Paul Pietsch

that year, went on to earn an M.S. degree in pathology from IU. She introduced changes in the didactic aspects of the pathology courses based on her studies and the contacts she had made within the local medical community; she also added a professional level histopathology laboratory to the general pathology course. Freddy Chang, while completing a Ph.D. in physiological optics at IU in 1976, also studied pharmacology. Chang briefly taught at the University of Alabama in Birmingham and returned to IU in 1977. Chang reorganized



Sally Hegeman

instruction in pharmacology. Among other things, he engaged a series of outside experts to deliver lectures. One such person was Sally Hegeman, a Ph.D. pharmacologist and then a member of the medical school faculty. Hegeman, also trained in biochemistry, would later become a regular member of the optometry faculty, in which capacity she would serve for many years, and would also design the School's instruction in biochemistry.

In 1976, the course in ocular pharmacology was increased from two credit hours to three credit hours. This occurred to keep IU graduates eligible to take board examination in all states. In the mid 1970s, the state of Tennessee announced that candidates for licensure were required to have transcript credit for three or more semester hours of pharmacology. A temporary solution in the 1975-76 school year was to offer a third credit hour of ocular pharmacology as a Selected Studies course (course number V569) until the third hour could officially be added to the curriculum in the ocular pharmacology course. A few years later, several states increased their

requirements to three hours of ocular pharmacology and three hours of general pharmacology. The IU School of Optometry started offering three semester hours each in ocular and general pharmacology in 1977.

Irvin Borish, as Clinic Director from 1978 to 1982, required the IU optometry students for the first time to learn and use pupil dilation and binocular indirect ophthalmoscopy. Freddy Chang orchestrated the instruction needed to fulfill the latter requirement. Charles Shick, Patricia Keech, Merle Pickel, Charles Haine, Hurbert Riley, and John Hitchcock were among those who revamped and provided instruction in clinical diagnostic procedures for ocular diseases in the 1970s and into the 1980s. Additional courses relating to ocular disease diagnosis and management were added to the curriculum in 1993. In recent years, Vic Malinovsky and John Gelvin have been instrumental in developing the courses and clinics in ocular disease, and Carolyn Begley and Mark Braun have updated the General Pathology course.



Irvin Borish

The courses in pharmacology have continued to undergo modifications through the years. In 1997, Sally Hegeman and Robert DeVoe worked to integrate the courses in general physiology and general pharmacology into a two course sequence, Systemic Physio-Pharmacology. Hegeman and DeVoe have since retired, and these courses are now taught by Suresh Viswanathan and S.P. Srinivas.



John Gelvin and Vic Malinovsky

The names and numbers of courses in the IU optometry curriculum show interesting trends. From the start of the optometry program in 1953 until 1960, the general anatomy course was A311 Anatomy for Optometry Students I. From 1960 to 1987, the general anatomy course bore the number A311 and the name Intermediate Human Anatomy. The course number A311 indicates that the course was taught under the auspices of the Department of Anatomy of the medical school and at an undergraduate level. In the early years of the optometry program, instruction in human biology was achieved in A311 and other courses which were taught outside of Optometry and carried undergraduate course numbers. Gradually, the School of Optometry faculty took over more of the instruction of the optometry students in human biology, and the

course number levels increased. By 1993, courses in human biology were (with the exception of general physiology) taught within the optometry school at a graduate level: V511, Human Gross Anatomy; V514, Neuroanatomy; and V517, Histology. At IU, the V denotes courses offered by the School of Optometry, and courses at 500 or above are at the graduate level. The course in which instruction in ocular anatomy has been provided has been variously A312 Anatomy for Optometry Students II, from 1953 to 1960; A312 Ocular Anatomy, from 1960 to 1972; V412 Ocular Anatomy and Neurology, from 1972 to 1980; V412 Ocular Anatomy, from 1980 to 1993; and V512 Ocular Anatomy, from 1993 to the present. In 1953, required IU optometry courses ranged from the 200 (sophomore) level to the 500 level. In the 2003-2005 IU School of Optometry Bulletin, the range of courses is entirely at the graduate or professional level, from 500 (for first year optometry students) to the 800 level (during the fourth professional year). This signifies that the majority of students admitted to the School of Optometry today will be completing their fifth through eighth years of university studies.

External Clinics and Clinical Rotations



*top to Bottom:
Ed Marshall
Steve Hitzeman
Patty Henderson*

Another significant change in the optometry program was in affording students clinical experiences off campus, thus giving them the opportunity to see more patients and a wider variety of conditions. The Community Eye Care Center on the west side of Bloomington started in very modest fashion in 1972. The west side clinic was begun largely through the efforts of Jack Bennett, Edwin Marshall, and community leaders, and it operated at the Christian Center at West 14th Street from 1972 to 1984. In 1984, a new facility started at 803 N. Monroe Street in Bloomington.⁵ The latter facility, now known as the Community Eye Care Center, has expanded several times and today it occupies a two-story building. Directors of this facility have been Edwin Marshall (1972 to 1977), Steven Hitzeman (1977 to 1995), and Patricia Henderson (1995 to the present).

The Illinois Street Eye Clinic was started in Indianapolis in 1976 through a grant from the Indiana Rehabilitation Services Division of Services for the Blind. Jim Hunter was the first faculty member in charge there. The Walker Eye

Clinic was started in downtown Indianapolis in 1984, with Linda Casser as the overseeing faculty member. Both Indianapolis clinics were merged to form a new and expanded clinic, the Indianapolis Eye Care Center, at 501 Indiana Avenue. The Indianapolis Eye Care Center, dedicated in 1992, provided 12,000 square feet for exam rooms, frame and dispensing areas, special tests rooms, and office and service areas.⁶ Today the School also has clinics in Guanajuato, Mexico, and in Carmel, Indiana. The clinic in Carmel is an ambulatory care facility with the IU Department of Ophthalmology and the IU School of Optometry collaborating with the IU Medical Group.

Four years ago, the School started its Rural Health Clinic Program through a Preventive Services Grant from the Indiana Department of Health. It has been managed for three years by part-time faculty member Jeff Perotti. At present, the clinics in this program are located in three Indiana towns: Jeffersonville, Hardinsburg, and English. The emphasis is on general examinations, and there are provisions for care to low income patients without insurance. Small dispensaries at those clinics make spectacle dispensing available at relatively low cost.

In the 1970s, a system of six-week external rotations in the fourth year was initiated. This has expanded to the current system in which the fourth year consists of four twelve-week rotations: one in Bloomington, one in Indianapolis, and two elsewhere. As the external rotation program expanded in the early 1990s, Bill Rainey organized a system of feedback for the students concerning rotations to help them decide upon their preferences among different sites. Ted Grosvenor followed Bill Rainey as the coordinator of external rotations. Today external rotations are coordinated by Clinic Director Steve Hitzeman.

Outreach Programs and School Screening

The School and its faculty, staff, and students have developed several outreach programs since the 1970s. The Fellowship of Christian Optometrists, founded at IU largely through the efforts of Cliff Brooks, has made several humanitarian efforts. Campus chapters of the Volunteer Optometric Services to Humanity (VOSH) have made numerous spectacle distribution trips, notably in recent years to Guanajuato, Mexico. In the 1970s, John Levene, as part of the low vision course, initiated vision screening trips to local nursing homes. Other screenings were conducted through the Indiana Area 10 Agency on Aging. An important outgrowth of these geriatric screenings was a low vision clinic



John Levene, Dan Gerstman, and Linda Casser

in Indianapolis, subsequently the School's first clinic in Indianapolis. Paul Bither was the optometrist who directed the low vision work at the first Indianapolis clinic.

Today, there are numerous outreach efforts by the School in the Indianapolis area; approximately 500 free or reduced cost eye and vision examinations were performed in the past year for persons in need. Under the direction of Steve Hitzeman, groups of students have performed screenings for athletes for several local teams and at a number of events, including the 1996 Olympic Games, several International Special Olympics, and the Amateur Athletic Union Junior Olympics. These are just a few examples of the outreach efforts which, beyond their service function, have enriched the clinical experiences of the students.

The first school vision screening efforts by the IU optometry school were directed by Neal Bailey in the Spring Semester of 1956.¹ Persons in charge of school screening from then until the mid 1970s were Robert Mandell (1957-



Richard Meetz

1960), Tom Madden (1960-1972), John Shackle (1972-1973), Kenneth Lorenz (1973-1974), and William Carriger (1974-1976).⁷ In 1976, Richard Meetz was hired to expand the screening program statewide. School screenings were conducted inside a converted school bus and later a Winnebago modified for use as mobile eye clinics. The Winnebago was purchased using funds provided by Indiana Lions Eye Bank, Inc. Through the late 1970s and early 1980s, approximately 6,000 children were screened annually. The largest number of children screened was 7,577 during the 1981-82 school year. (In the 1970s, the school also did glaucoma screenings in a trailer purchased with monies from the Indianapolis Lions Club) In the early 1990s, the school screening program was scaled back because of increasing didactic requirements and additional opportunities for broader clinical experiences for the students. In 1995, Meetz stepped down as director of the school screening program, and the program was then assigned to the Binocular Vision/Pediatrics Service, coordinated by Bill Rainey. By then, the mobile vehicles were no longer in good operating condition and the screenings were performed inside the schools. Since 2000, the school

screenings have been coordinated by Don Lyon. At present, they are conducted in the fall semester by third year students, supervised by the Binocular Vision/Pediatrics resident and various faculty members.

International programs have been a conspicuous part of IU life ever since the early days of Herman Wells' presidency and the publication of Hoosier Wendell Wilkie's One World. The School has participated in international optometry, especially since Henry Hofstetter's tours of optometric educational institutions in other parts of the world. Optometry faculty and alumni have assisted in optometry programs in such places as India, the Philippines, South Africa, Poland, Thailand, New Zealand, Australia, Mexico, China, and Tibet. Today, Jerry Lowther, Ed Marshall, Doug Horner, Cliff Brooks, and others continue Hofstetter's tradition of extensive involvement in optometry programs around the world.

The Optometry Student Body

The size, gender ratio, and ethnic mix of the optometry student body began to change in the late 1960s and early 1970s. Class sizes from the first graduating class in 1956 up to the Class of 1969 had ranged from 11 to 33. A prerequisite for a grant that helped fund the construction of the optometry building was that class sizes be increased. The size of the graduating class in 1969 was 31. The next year, 1970, there were 44 graduates. Graduating class sizes increased to 47 in 1971, 55 in 1972, 57 in 1973, and 61 in 1974. The Class of 1976 numbered 72, and with the exception of one year (55 in 1988) there have been at least 61 graduates each year since 1976.

By the early 1970s, entrance into the health care professions had become highly prized, doubtlessly because of their prestige. In addition, acceptance into a professional school brought deferment from military service. The Vietnam War was in progress at the time. With enlarged applicant pools from which to choose, the School's admissions committee could afford to be highly rigorous in its selections. There were 501 applicants for the entering class in 1973 and 748 applicants in 1975.^{8,9} Those numbers can be contrasted with 56 applicants in 1964 and a little over 180 in 1968.¹

In the 1970s, societal changes afforded more opportunities for women in the learned health professions, and women started entering optometry in increasing numbers. The first six graduating classes at IU were exclusively male. Through 1973 at least ninety percent of each IU

optometry graduating class was male. Then in 1974, seven of the 61 graduates were female. In 1975, six of the 58 graduates were female, and in 1976, eleven out of 72 were women. The proportion of women students graduating continued to increase until, in 1993, they outnumbered the men. Each year from 1994 to 2001, the number of male versus female graduates differed by no more than five. The Class of 2002 included 28 men and 46 women. In the Class of 2003, there were 33 men and 42 women.

Under-representation of minorities in the profession and the student body has been a concern of the school's administration since its early years. In the 1970s, Gordon Heath and Admissions Committee Chairman Ron Everson developed a program of recruiting and retaining minority students. Beginning in 1973, Edwin Marshall and Arthur Jones started the Summer Institutes in the Health Professions program to bring disadvantaged and minority students to IU to learn about opportunities in the health professions.⁹ These efforts were successful in increasing the number of African-American students in the School of Optometry, with 14 students graduating from 1978 to 1980, although the number of African-American students decreased in the 1990s. Today the predominant minority group among IU optometry students is Asian or Asian-American, with 15 graduates in the two years of 2002 and 2003 combined.

Addition of Non-Optometrists to the Faculty

Another change in the school since the 1970s has been an increase in the number of non-optometrists serving on the full-time optometry faculty. Until 1969, the only non-optometrists on the full-time faculty were J. Stanley Rafalko and Ingeborg Schmidt. Rafalko had been serving on the faculty of the Southern College of Optometry for three years before coming to IU in 1953. He was recruited by the Division of Optometry, and he taught the general anatomy and ocular anatomy courses required of optometry students. These courses were designed by Henry Hofstetter, Director of the Division of Optometry in collaboration with Richard Webb, Chairman of the School of Medicine Department of Anatomy. Because the courses Rafalko taught were technically offered by the Department of Anatomy, Rafalko was officially Associate Professor of Anatomy from 1953 to 1971. From 1971 to his retirement in 1976, he was Associate Professor of Anatomy and Optometry. Although Rafalko was technically not an optometry professor, he was

generally identified with the optometry school. Ingeborg Schmidt was a physician and a physiological optics research scientist in Europe before moving to the United States. At IU Schmidt taught in several different areas, including ocular pathology, pharmacology, low vision, and physiological optics. Schmidt served on the faculty from 1954 until her retirement in 1970.

Arthur Jones, an experimental psychologist, joined the full-time faculty in 1969, and Paul Pietsch, an anatomist, in 1970. Gary Hafner, also



Larry Thibos



Arthur Bradley



Donald Miller



S.P. Srinivas

an anatomist, whose Ph.D. work had been in electron microscopy, became a member of the faculty in 1976.¹⁰ In the early 1980s, Sherman Lee Guth, who was on a joint faculty appointment between the IU School of Optometry and the Department of Psychology, and Dean Gordon Heath led an effort to recruit notable and soon-to-become notable basic vision scientists to the optometry faculty. Those hired as full-time faculty included Hiroharu Noda, a neurosurgeon turned neurophysiologist, in 1981; Robert DeVoe, a physiologist, in 1983; Larry Thibos, an electronics engineer and vision scientist, in 1983; Arthur Bradley, a vision scientist and psychophysicist, in 1985; and cell and molecular biologist David S. Williams, in 1986.¹¹⁻¹³ More recently, non-optometrist basic scientists added to the faculty include Donald T. Miller (1998), who brought expertise in optics, and S. P. Srinivas (2000), who studies pharmacological mechanisms.

The addition of basic scientists added depth and breadth to the research program in applied physiological optics that had been established by the work of Henry Hofstetter, Merrill Allen, Gordon Heath, Ingeborg Schmidt, Rogers Reading, and others. It also allowed courses in the biomedical sciences to be taught within the School of Optometry rather than by other departments on the campus. As a consequence of the addition of more non-optometrists to the optometry faculty, IU has become recognized beyond the optometric profession for its vision science research. Another trend has been an increase in the number of non-optometrists drawn to the graduate program in physiological optics/vision science. Through 1980, over 90% of the IU physiological optics M.S. and Ph.D. graduates were optometrists. In the 1980s, about 60% of those completing graduate degrees were

optometrists.¹⁴ At the present time, optometrists are in the minority in the graduate program. Among the reasons for decreased enrollment of optometrists in the graduate program are availability of residency programs, expanded employment opportunities, and increased debt from school costs.

Optometry Clinic

The school's first Clinic Director was Gordon Heath. He served in that capacity from 1955 to 1960. Bill Baldwin was Clinic Director from 1960 to 1963, at which time Tom Madden became the Clinic Director. Poor health forced Madden to step down in 1972, and he was replaced by Charles Shick. Shick oversaw a number of changes in the clinic in the early and mid 1970s, including the addition of third year clinic to the curriculum in 1972 and the beginning of clinical experiences for the students off campus.

In 1977, R.C. Van Hoven left the private practice of optometry and assumed the post of Clinic Director. Van Hoven instituted a module system in the Atwater Clinic, in which individual modules within the clinic operated semi-independently.^{15,16} His objective was to simulate private practice. Van Hoven retired in 1978 due to failing health. Irvin Borish became Clinic Director in 1978. He considered the module system to be beneficial; but after a few years, he found it necessary to discontinue it for reasons of cost. Clinic Directors after Borish have been Cliff Brooks (1982 to 1985), Hubert Riley (1985 to 1989), Vic Malinovsky (1989 to 1995), and Steve Hitzeman (1995 to the present).

In the late 1970s, equipment in the clinic had been neglected and had not been upgraded to an appropriate level. As a consequence, the American Optometric Association Council on Optometric Education, following a site visit in September of 1978, placed the IU School of Optometry on "Conditional Accreditation." The council specified lack of up-to-date clinical equipment and disrepair of existing apparatus.¹⁷ In response, the School and the University put together a special package of \$470,000 for equipment purchases.¹⁸ Today, the School's clinics have state-of-the-art equipment through purchases, loaner equipment from various companies, donations, and special purchase agreements.

The Atwater clinic recently underwent extensive renovations and remodeling. Remodeling of the west side of the clinic was completed in 2000, with renovation of contact lens examination rooms, supply room, records room,

and waiting and central public areas.¹⁹

Remodeling of the east side of the Atwater clinic (Primary Care Clinic examination and special test rooms and offices; frame selection area; dispensary; Binocular Vision/Pediatrics Clinic exam rooms, training area, and offices; and conference room) was completed in 2001.

In addition to the general clinic, or Primary Care Clinic as it is known now, the clinical program has always included specialty services in Visual Training, Contact Lenses, and Low Vision. Some of the faculty members who have worked in the Visual Training Clinic (now called the Binocular Vision/Pediatrics Clinic) are Gordon Heath, Robert Mandell, Ron Everson, Jack Pierce, Rogers Reading, Merrill Allen, Ed Marshall, Patrick Cashin, Bill Somers, Richard Meetz, Khashayar Tonekaboni, Doug Horner, Bill Rainey, David Goss, Andrya Lowther, and Don Lyon. There have been many faculty who have consulted in the Contact Lens Clinic; among those who have spent extensive time in that clinic are Neal Bailey, Charles Shick, William Lyle, Janet Stone, Hubert Riley, John Hitchcock, Irvin Borish, Ted Grosvenor, Sarita Soni, Richard Meetz, Daryl Hodges, Ed Bennett, Alan Tomlinson, Neil Pence, Joseph Halabis, Carolyn Begley, Vic Malinovsky, Colleen Riley, Gerald Lowther, Susan Kovacich, and Dean VanNasdale. Faculty who have provided low vision care include Ingeborg Schmidt, John Levene, Dan Gerstman, Gary Walters, Paul Bither, Debra McConnaha, and Elli Kollbaum. Management of patients with ocular disease evolved to the point that a separate clinic, the Ocular Disease Clinic, was started in 1991. Faculty members responsible for the Ocular Disease Clinic have been Vic Malinovsky, John Gelvin, and Jane Ann Grogg. A somewhat unique service that was initiated in 2000 is infant vision care. T. Rowan Candy, an infant vision specialist and researcher, sees patients under the age of three years in the Binocular Vision/Pediatrics Clinic.



Above and Below: Dispensing and Exam room in the remodelled Atwater Eye Care Center



Research

Research has always been considered important in the optometry program at IU. As the size and the diversity of expertise of the faculty

have increased, research activity has increased. One quantifiable indicator of research output for which data are available at times over the life of the school is number of publications. In 1953-54, the two full-time members of the optometry faculty had 13 publications between them.¹ In 1960-61, the faculty published about 35 items.²⁰ A compilation of faculty and graduate student writings from 1970 to 1974 lists 198 publications.²¹ More recently, the School of Optometry Annual Reports from 1998-99 to 2002-03 together list 269 faculty publications.

The graduate program in physiological optics started in the fall of 1954.¹⁴ The first M.S. degrees were awarded in 1956, and the first Ph.D.s in 1962. The number of M.S. graduates was 10 in the 1950s, 36 in the 1960s, 23 in the 1970s, 5 in the 1980s, and 11 in the 1990s. Ph.D. graduates numbered 9 in the 1960s, 21 in the 1970s, 15 in the 1980s, and 13 in the 1990s. For the first two or three decades of the graduate program, the most common area of employment of the graduates was optometric education. Today fewer are employed in optometry schools. Present day graduates receive degrees in vision science rather than in physiological optics,²² and a larger proportion are international students. Another difference in the graduate program from its first few decades to the present day is that more of the early graduate students played substantial roles in the teaching of optometry students.

Borish Center for Ophthalmic Research

The Borish Center for Ophthalmic Research was dedicated in 1995. The Borish Center was named for Irvin M. Borish, who practiced in Kokomo, Indiana, for many years and was on the IU faculty part-time from 1955 to 1973 and full-time from 1973 to 1983. The beginning of the Borish Center was made possible by grants from the Indiana Chapter of the American Academy of Optometry and the IU Office of Research and the University Graduate School and by funds from the School of Optometry. Space was remodeled on the Atwater clinic floor through an IU Research Facilities Fund grant along with funds from the IU Bloomington Chancellor's office and the School of Optometry. The Center has received several financial bequests from Dr. Borish and his late wife Bea. Co-directors of the Center have been P. Sarita Soni and Gerald Lowther. The Borish Center facilitates clinical research and works with ophthalmic industries to evaluate products and techniques.

Optometry Library

The Optometry Library has maintained an outstanding collection of optometry and vision science books and periodicals since its establishment in 1968. Its



Doug Freeman and James Leeds

success can be attributed to outstanding Head Librarians, such as Elizabeth Egan, who was the first Optometry Head Librarian from 1968 to 1980; Roger Beckman, from 1983 to 1986; and Douglas Freeman, who has served in that capacity since 1990. The Optometry Library has also had some very capable assistants. Lois Selk worked in the Optometry Library for 24 years.

The Optometry Library collection has increased from about 10,000 volumes in 1976 to about 22,000 volumes in 2003. An important addition to the library in 1992 was the lifelong book collection of Dr. James P. Leeds of Carmel, Indiana, which numbered about 3,600 volumes.

Besides supporting the educational and research efforts of the school, the library also serves as an information resource center for clinicians throughout the state and region.²³ The Optometry Library's involvement in information technology paralleled the School of Optometry's move into the extensive use of computers. Freeman is both the School's Librarian and its Director of Technology. No function of the School of Optometry, whether it be instruction, patient care, research, communication, service, or administration, is unaffected by computerization. Unlike in 1968, electronic technologies are now at the core of all of the library services to students, staff, faculty, alumni, and the general public.

Optometric Technician Program

IU started an optometric technician program in 1971. The program was unique at the time because it was the first paraoptometric program to be offered in a major university and the first associated with an optometry school. The program was designed to prepare students to become optometric assistants. Then, as now, the program was two years in length and led to an associate degree. Jerald Strickland was the first coordinator of the optometric technician program. Ted Grosvenor was the Director of the program from 1974 to 1977, and Cliff Brooks has been the Director since 1977. A member of the first class of students to complete the optometric technician program in 1972 was Sandra Corns Pickel, who started working for the School in the clinic in 1972 and who has been a member of the optometric

technician program faculty since 1976. Today the program also offers training in opticianry.

The School started an in-house ophthalmic lens lab in 1979 to furnish educational opportunities for its optician students as well as to provide more efficient service to clinic patients.²⁴

An important recent technological advancement in the optical laboratory has been the installation of a computer-assisted linkage of the lab to the School's clinics.²⁵ The system transmits ordering information, data about the patient's frame, and the patient's prescription to the lab and facilitates the fabrication and delivery of the spectacles.

Administration

The first Director of the IU Division of Optometry was Henry W Hofstetter (1914-2002).²⁶⁻²⁸ Hofstetter received his optometry, M.S., and Ph.D. degrees from The Ohio State University in 1939, 1940, and 1942, respectively. He was a member of the faculty at Ohio State until he became Dean of the Los Angeles College of Optometry in 1949. Hofstetter was Director of the IU Division of Optometry from 1952 to 1970. He was made Rudy Professor of Optometry in 1974, and his formal retirement from the faculty was in 1980. Gordon G. Heath (1922-2004) was named Director of the IU Division of Optometry in 1970.^{29,30} With the optometry program's change to School status in 1975, Heath's title became the Dean of the School of Optometry. Heath earned his optometry degree at Los Angeles College of Optometry and M.S. and Ph.D. degrees in physiological optics from the University of California Berkeley. He joined the IU faculty in 1955. He was Clinic Director from 1955 to 1960, Director of Physiological Optics graduate program from 1960 to 1970 and from 1988 to 1992, and Director/Dean from 1970 to 1988. The next Dean of the IU School of Optometry was Jack W. Bennett (1932-2000).³¹ Bennett received his optometry degree from IU in 1959. Bennett practiced in Bloomington from 1959 to 1970, during which time he was a part-time clinical faculty member at IU. He left private practice in 1970 to become a full-time faculty member. In 1975, Bennett went to Ferris State University as the first Dean of Michigan's new optometry school. In 1988, he returned to IU to serve as the Dean of

the School of Optometry, a position he held until 1998. He was Dean at the University of Missouri St. Louis School of Optometry from January, 1999 to April, 2000. The present Dean of the IU School of Optometry is Gerald E. Lowther.³² After completing optometry school at The Ohio State



The Directors/Deans of the IU Division/School of Optometry: Gerald Lowther, Henry Hofstetter, Gordon Heath, Jack Bennett

University, he practiced for about a year and half in Ohio. He earned an M.S. in physiological optics from Ohio State in 1969 and a Ph.D. in 1972. Before coming to IU in 1994, Lowther was a faculty member at Ohio State for five years, Ferris State for 12 years, and the University of Alabama

Birmingham for five years. In 1998, he assumed the role of Dean of the IU School of Optometry.

The administrative structure of the school has changed over the years. Initially, it operated with committees and "delegated and shared operational responsibilities."³³ In 1973, two Assistant Directors were appointed, Jack Bennett as Assistant Director for Professional Affairs and Ronald Everson as Assistant Director for Internal Affairs, and four departments were established, the Departments of Socio-Optometric Studies, Visual Sciences, Patient Care, and Special Studies.³⁴ By 1977, the departmental structure had changed to three departments: Biological and Health Sciences, Visual Sciences, and Clinical Sciences, and Dennis Yamamoto was named Assistant to the Dean.³⁵ In 1983, two Assistants to the Dean were appointed: Daniel R. Gerstman (for Budgetary Affairs and Fiscal Management) and Ronald Jensen (for Student Affairs and Professional Relations). In 1983, there were two departments, Visual Sciences and Clinical Sciences, and for the first time, the Coordinator of Student Affairs, Elena Bastin, was listed among the officers of the School in the Bulletin.³⁶ In 1987, Dan Gerstman became Associate Dean for Budgetary Affairs and Fiscal Management.³⁷

In the 1990s, additional Associate Deans were appointed. At present, there are four Associate Deans. Dan Gerstman is Executive Associate Dean for Budgetary Planning and Administration. Edwin C. Marshall is the Associate Dean for Academic Affairs and Student Administration. A Professor of Optometry, he is also an Adjunct Professor of Public Health in the School of Medicine. In 2004, he became IU's University Grand Marshal. He presided over the investiture of Adam W. Herbert as 17th President of Indiana

University. P. Sarita Soni is Optometry's Associate Dean for Research. She is a Professor of Optometry and has served as a grants administrator in the Bloomington Dean of Faculties office. Graeme Wilson is Associate Dean for Graduate Programs. After retiring as Professor Emeritus from the University of Alabama Birmingham, Wilson became a Professor of Optometry (part-time) at IU in addition to the School of Optometry's Associate Dean for Graduate Programs.

Staff



Beverly Glosser, grandson, Joyce Turpen, Jeanette Hudson, Joanne Delone, and Gloria Cochran

There have been many dedicated staff members who have served the optometry program over the years. The number of staff employed by the optometry program has, of course, increased greatly. The IU Division of Optometry directories show two to three people listed as staff each semester from 1955 to 1961.³⁸ In contrast, the IU School of Optometry directory for the fall of 2004 lists 84 persons as staff and research associates. There have been several retirements of key staff people in the last year or two. Persons who recently retired from the full-time staff with 20 or more years of service to the School are Gloria Cochran, who retired in 2002 after 30 years; Thomas Tokarski, who retired in 2004 after 29 years; Bev Glosser, who retired in 2004 after 26 years; Barb Buker, who retired in 2003 after 25



Former staff member Howard Brown as a contact lens patient

years; and Jeanette Hudson, who retired in 2002 after 23 years. Current staff members with 20 or more years of service to the School of Optometry are Danny Jackson (29 years), Angela Dolan (26 years), Jacqueline Olson (26 years), Judy Boyer (22 years), Cindy Lepore (21 years), Sharon Marsh (20 years), Tim Thacker (20 years), and Ann Michael (20 years). Other full-time staff members who served the School for over 20 years in the period of time from the 1970s to the 1990s include Elena Bastin, Howard Brown, Phyllis (McMullin) Riley, and Lois Selk. The staff member who had the longest period of time between hiring by the optometry program and retirement from it is

Sandra (Rogers) Chupp, who worked as a secretary for the Division of Optometry from 1958 to 1969, and then after working in the optometry practice of Charles Shick for a number of years, returned to work part-time for the School of Optometry from 1993 to 2004. These are only a few of the many staff persons who have ably served the School of Optometry in the last few decades.

The efforts of staff have been integral to the instructional work, clinical operations, administrative functions, and research activities of the School. There are many staff members who are truly unsung heroes. Secretaries often have to deal with unreasonable faculty deadlines. Clinic staff are many times the first and last persons representing the School seen by patients in the Clinic. And often overlooked is the importance of the work done by the staff of the Machine Shop, who have to keep all the equipment and furnishings of the School in working order. It is an enormous understatement to say that the School of Optometry could not have performed its many functions over the years without the efforts of its staff members.

Comments

The complexity and breadth of the activities and work of the IU optometry program have increased greatly since its beginning. As a simple demonstration of this fact, one can look at the school directories. In the Fall 1956 IU Division of Optometry directory, there were 14 full-time and part-time faculty, 2 staff members, 8 physiological optics graduate students, and 51 optometry students. In the Spring 1970 directory, there were 18 full-time faculty, 12 part-time faculty, 21 graduate students and teaching assistants, 16 staff members, and 192 optometry students. In the 2003-2004 directory, there were 59 full-time, part-time, and emeritus faculty; 68 adjunct faculty; 19 vision science graduate students; 73 staff, research associates, and post-doctoral appointees; 294 optometry students; and 28 optician/technician students.

This article has attempted to present a brief overview of major changes and pivotal events in the history of the Indiana University optometry program since the 1970s. The optometric profession and the school have seen many significant changes since then. The other articles in this issue of the Indiana Journal of Optometry will provide more detail on some of these and other events and developments in the history of the Indiana University School of Optometry.

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Among them, the authors have over one hundred years of experience at Indiana University. Dan Gerstman graduated from optometry school at IU in 1969 and received his M.S. degree in 1971 and has been a member of the faculty since 1971. Paul Pietsch is an Emeritus Professor of Optometry, after having served on the faculty from 1970 to 1994. Richard Meetz completed optometry school at IU in 1976 and has been a member of the faculty since that time. David Goss was a graduate student at IU from 1976 to 1980, and has been on the faculty at IU since 1992.

A History of the IU School of Optometry's Clinics, External Rotations, and Residencies

by Steven A. Hitzeman, O.D. and David A. Goss, O.D., Ph.D.

The IU optometry program's first clinic opened in Jordan Hall in 1955. The clinic moved to Foley House in 1959. The sole occupant of Foley House was the Division of Optometry. No longer standing, it was located at 744 East Third Street. The first patients at the Optometry Building at 800 East Atwater Avenue were seen in February of 1968. Developments in the optometry program's clinic up to the mid 1970s were discussed in the history of the IU Division of Optometry.¹ This article will give a brief history of some of developments in the Clinics of the IU's optometry program from the 1970s to the present. Included will be a discussion of the School's external rotations and residencies.

Clinic Directors

A number of persons have served as the Director of Clinics: Gordon Heath (1955-1960), Bill Baldwin (1960-1963), Tom Madden (1963-1972), Charles Shick (1972-1977), R.C. Van Hoven (1977-78), Irvin Borish (1978-1982), Clifford Brooks (1982-1985), Hurbert Riley (1985-1989), Victor Malinovsky (1989-1995), and Steven Hitzeman (1995 to the present). As enrollments have increased and clinical programs have been added, the scope and complexity of the position have increased. The Clinic Director today is responsible for the overall operation of the School's clinics, for scheduling of external rotations, and for the School's residency programs.

Community Eye Care Center

The Indiana University School of Optometry has long been committed to community service. A clinic on the west side of Bloomington was opened in February of 1972 and was located at the Christian Center, 827 West 14th Street, from 1972 to 1984. The clinic was housed in the garage of the Christian Center building and was funded on a grant from the United States Department of Health Education and Welfare. The Christian Center was operated by the Monroe County United Ministries. Initially the clinic consisted of a waiting area, two exam rooms and a dispensary/ lab area, and it was open three afternoons a week. Edwin Marshall and Jack Bennett were the driving force in establishing this new clinic. Marshall was Director of the clinic from 1972 to 1977. In 1977 Steven Hitzeman became the Director of the clinic.

Through effort with many local welfare and service organizations, the clinic grew from two students two or three days a week to four students five days a week by 1981. Some of the agencies the clinic provided services for were the Head Start program, the Health Services Bureau, the Township Trustees, the Developmental Training Center and the Stonebelt Center for the Handicapped.

Members of the Bloomington community have been important in the development of this clinic, which is now known as Community Eye Care



At the Community Eye Care Center 20th Anniversary Commemorative Open House, April 29, 1992: Bloomington Mayor Tomilea Allison, Steven Hitzeman, Rev. Ernest Butler, Edwin Marshall, IU School of Optometry Dean Jack Bennett, IU Vice President Kenneth R.R. Gros Louis.

Center. One such person was the late Reverend E.D. Butler, former pastor of the Second Baptist Church in Bloomington. At the open house in 1992 celebrating the twentieth year of the Community Eye Care Center, he observed that the clinic was "a blessing to our community" and that it "has made a difference in the lives of many who knew the pain of poverty and the disadvantage of poor vision."² Gladys (Smith) Chambers, who was the receptionist and community liaison for the clinic in its early years recalled later that: "When the clinic opened in 1972, I was the only staff person. I remember having a variety of different responsibilities those first few years. They included getting assistance for people who couldn't afford the cost of an exam or glasses, working with the directors of many social and community agencies to promote the clinic and its services, and being responsible for all the day to day administrative duties of the clinic....I feel a sense of pride and accomplishment in being a part of bringing this clinic to an area of the Bloomington community where it is available to many people."²

The clinic has experience steady growth since



At the Community Eye Care Center 20th Anniversary Commemorative Open House, April 29, 1992: IU School of Optometry Dean Jack Bennett, IU Chancellor Herman B. Wells, Steven Hitzeman, Edwin Marshall.

its opening. In 1984 the clinic was moved to 803 N. Monroe Street in Bloomington. By 1992 there were six exam rooms available and the reception and dispensing areas had been enlarged and remodeled. In 1995, Steve Hitzeman became the Director of Clinics with the responsibility for all of the School's clinics, and Patricia Henderson took his place as the Director of the Community Eye Care Center. Under her direction the clinic expanded to such an extent that in 1998 a major remodeling was undertaken to increase the size of the clinic to twice its previous area. Specialty services were added, including ocular disease, low vision, and binocular vision/pediatrics. Community Eye Care Center was expanded again in 2003 and now encompasses 16 exam rooms on two levels. Over the years, many students have enjoyed the close-knit atmosphere of this clinic, some of them referring to it as "The Club."

Indianapolis Eye Care Center

The Indiana University School of Optometry has a long and interesting history of clinical endeavors in the Indianapolis area. The original Indianapolis facility, the Illinois Street Eye Clinic, was opened in December of 1976 at 1801 N. Illinois St. with a ten-year grant from the Division of Services for the Blind of the Indiana Vocational Rehabilitation Services Board. For the first ten years of its existence, it was under the clinical direction of Jim Hunter. It was home to six student interns per rotation and provided full scope optometric care, including low vision services. The full-time low vision clinic was originally under the direction of Paul Bither. After Bither left the School in 1988, low vision services were provided for the School in Indianapolis by Debra McConnaha until the summer of 2004. In 1986, Marjorie Knotts became the acting director for the entire facility, and she served in this capacity until the fall of 1991.

The School's second Indianapolis clinic, the Walker Eye Clinic, was opened in October of 1984

in the historic Madame Walker Theatre building on Indiana Avenue. It was under the direction of Linda Casser and, like its Illinois Street sister clinic, provided full scope optometric services. The clinic was home to four student interns per rotation. In 1991, Casser was named the director of both facilities and remained in charge of them both until their closure in 1992.

The closure of the original Indianapolis clinics in 1992 came as a result of the opening of the School's current Indianapolis clinic, the Indianapolis Eye Care Center, on November 16, 1992.³ The facility, located at 501 Indiana Ave., is practically in the shadow of the Walker Theatre building where the Walker Eye Clinic had been located. It was directed by Linda Casser from its opening in 1992 until the Spring of 1997. Jack Downey became the interim director until the current clinic director, Brad Sutton, joined the faculty in November of 1999. Downey has remained with the facility as a full-time clinical consultant.



Steven A. Hitzeman

Today, the clinic is a vibrant, busy facility with thirteen to fourteen student interns per rotation. The clinic contains 12,000 square feet for exam rooms, frame and dispensing areas, special tests rooms, and office and service areas. Every aspect of clinical eye and vision care is provided at the facility including primary eye and vision care, contact lens services, ocular disease services, binocular vision/pediatric care, low vision care, and ophthalmological services. It has experienced substantial growth over the last several years and has evolved into a significant community resource in the downtown Indianapolis area.

Other Clinics Outside of Bloomington

The School opened a clinic in Guanajuato, Mexico in February, 2000. The city of Guanajuato is about 150 miles northwest of Mexico City. The Clinic provides both educational opportunities for IU's optometry students and needed eye and vision care for persons who otherwise might not receive it. IU School of Optometry personnel had been making Volunteer Optometric Services to Humanity (VOSH) mission trips to Guanajuato for several years before the clinic started.⁴ After the 1998 VOSH trip there, discussions occurred between Douglas Horner, IU faculty member; Cynthia Foster, IU optometry alumna; Carlos Perez Lopez, physician and medical director of the Department of Infants and Family for the state of Guanajuato; and Anthony Gutierrez, of the

humanitarian organization I Care International.⁵ Subsequently, clinic space in the General Hospital of Guanajuato was identified and remodeled for the clinic. When the Clinic opened, Cynthia Foster was made the Director. Several IU students take advantage of the twelve-week rotation there each year. Some students from The Ohio State University and the Victorian College of Optometry (Australia) have also rotated through the clinic. With a very large population of needy persons in the state of Guanajuato, the VOSH mission trips continue to provide spectacles and the clinic handles referrals from the VOSH program as well as regular patient visits. An edging ophthalmic laboratory has been added to the clinic, largely through the efforts of Jennifer Page. Donations of frames, lenses, funds, and equipment continue to help advance the mission trips and the clinic's efforts.

Four years ago the School started its rural clinics program. The Indiana State Department of Health provided grants for equipment purchases. The clinics are operated in multi-disciplinary health care facilities that serve patients without insurance. They are located in the Patoka Family Health Care Center in English, Indiana, the Family Health Center of Clark County in Jeffersonville, Indiana, and South Central Community Health Care in Hardinsburg, Indiana.⁶ Donations of spectacle lenses and frames from manufacturers and assembly of spectacles in the School's laboratory makes possible the provision of spectacles at minimal cost to the patients who need them. Jeff Perotti, a part-time faculty member in the IU School of Optometry, has overseen patient care at these facilities for three years.

The Clinic of the School of Optometry which opened most recently is IU Eye at Carmel, which is a joint effort with the IU School of Medicine Department of Ophthalmology. Located at 200 West 103rd Street in the Carmel area north of Indianapolis, it opened on February 16, 2004. Optometry services include routine eye and vision examinations, contact lens fitting, ocular disease management, and ocular surgery co-management. Melanie Pickett is the IU faculty member who is Director of the Optometry Clinic at IU Eye at Carmel. The IU Department of Ophthalmology provides a variety of surgical and treatment services at IU Eye at Carmel.

External Rotations

In 1975, IU School of Optometry initiated a system of six week external rotations in the fourth year. IU was one of the first schools or colleges of Optometry to utilize external rotations as training



Charles Shick

centers for interns. Charles Shick was the driving force behind the original external rotations. Some of the first IU external rotation sites were Fort Campbell Kentucky, Fort Knox, Fort Benjamin Harrison in Indianapolis, Lexington Veterans Administration, and Cleveland Veterans Administration. The

external rotation program has expanded and currently the fourth of optometry school consists of four twelve-week rotations, one in Bloomington, one in Indianapolis, one in a disease site and one in a primary care site. With expansion of the external rotation program in the early 1990s, Bill Rainey developed a system to provide students with information concerning the available rotations to help them make decisions about their preferences of sites. Ted Grosvenor followed Bill Rainey as the coordinator of external rotations. Today the scheduling of external rotations is one of the functions managed by Clinic Director Steven Hitzeman. At present external rotations are located in referral centers, Veterans Administration hospitals, military clinics, and private clinics in numerous places throughout the United States and at the School's Guanajuato, Mexico clinic. Evaluation of rotation sites is accomplished by a system of visiting sites, establishing goals and objectives at each site, and surveying student interns concerning their experiences.

The School's Main Clinic and Other Clinical Developments

Even as the School added clinics and external rotations beginning in the 1970s, the Atwater Eye Care Center, as it is known now, has remained the School's primary clinic. The Clinic in the Optometry Building has been located on the second floor since the building opened in 1968. Various minor remodeling works have been made over the years, but the first complete renovation of

the clinic was completed in 2001. When Gerald Lowther became Dean in



The remodeled reception area at the Atwater Eye Care Center (with the dispensary in the background.)



The remodeled west hallway area in the Atwater Eye Care Center.

1998 he negotiated with the University to help remodel the second floor of the Atwater clinic. This

remodeling took place between May 2000 and August 2001, and involved removing almost all of the pre-existing walls and structures on the second floor and completely changing the arrangement of rooms. The dedication of the remodeled Atwater Eye Care Center took place on October 3, 2001.

In addition to the development of off campus clinics and external rotations, one of the developments in the early 1970s was the addition of clinic to the third year curriculum in 1972. An experiment in the Clinic initiated in 1977 was a module system with the modules operating somewhat independently in order to simulate private practice. Although the module system was considered to be educationally beneficial, prohibitive costs made it necessary to discontinue it after a few years.

In the late 1970s, clinical equipment had not been upgraded adequately or replaced on a regular basis. When the American Optometric Association accrediting agency, the Council on Optometric Education, visited the School in the Fall of 1978, the School was placed on Conditional Accreditation.⁷ To remedy the situation, the School and IU worked together to put together \$470,000 for improvements in equipment.⁸ Through the considerable efforts of Dan Gerstman in negotiating loaner equipment and special purchasing agreements and in facilitating donations, the School's clinics can now boast state of the art equipment.

Residencies

The Indiana University School of Optometry has a long history of residency education. James Rakes was the School's first resident. He was a resident at the Veterans Administration Medical Center (VAMC) in Lexington, Kentucky for the year 1976-77. The original faculty residency director for the School was Charles Shick. James Rakes returned to the Lexington VAMC in 1978 as Optometry Director and the residency supervisor. He held that position until 2004 when he moved to Florida. The School of Optometry also has three affiliated residencies in ocular disease at various locations. A residency at the VAMC in Huntington,

West Virginia was established in 1984 by Jack Terry. Another residency position which resides at the VAMC in Danville, Illinois, was established in 1986 by Charles Haine. The first resident of this program was Patricia Henderson, the current Director of the Community Eye Care Center. A fourth affiliated residency was established in 2002 at Wang Vision Institute in Nashville, Tennessee in the area of Refractive and Ocular Surgery. The contact person for the Wang Vision Institute residency is Tracy (Schroeder) Swartz. There was an additional residency in ocular disease at the Muncie Eye Institute from 2001 to 2003 with Richard Mangan, but it was discontinued due to a practice reorganization in Muncie.

The School itself has four in house residencies. A contact lens residency was established in 1992 by Neil Pence. A Binocular Vision/Pediatrics residency was started in 1999 by Bill Rainey. The first resident of this program was Don Lyon, the current chief of Binocular Vision/Pediatric services and the residency supervisor for 2004. A Low Vision residency was established in 2001 by Debra McConnaha and an Ocular Disease residency was started in 2002 by Vic Malinovsky.

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Steven A. Hitzeman is a 1976 graduate of the Indiana University School of Optometry. He was profiled in the Fall, 2002 issue of the Indiana Journal of Optometry.

The Changing Student Body at the IU School of Optometry

By Susan Kovacich, O.D.

Girl Power

Of all the changes in the student body at the Indiana University School of Optometry, the most obvious change is in the number of female students per class. The first six classes were exclusively male, until one lone female student, Miriam H. Stemle (Boyd), entered the Class of 1962. The second female student was Joan Exford, a member of the Class of 1964, who was the first woman president of the American Academy of Optometry in 1993-94.



Susan Kovacich

Exford was also named as one of the October, 2004 inductees of the National Optometry Hall of Fame. There were two female graduates in 1965 and one in 1967, and from 1969 to 1973 there one to three females per class. Then in 1974, seven female ODs graduated. Richard Meetz, member of the IU Optometry Class of 1976 and currently an IU faculty member, noted that when his class entered in 1972, the 11 female students in his class were almost as many as all the females that had already graduated from the program.

Through the 1970s and 1980s, the number of female optometry students increased. Female students outnumbered male students at IU School of Optometry for the first time in

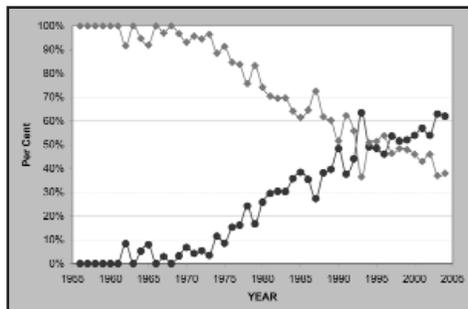


Figure 1. Percent males (lighter symbols) and females (darker symbols) in each graduating class.

1993, and with a few exceptions, females have outnumbered their male counterparts since, as can be seen in Figure 1. The classes of the new millennium have been dominated by female students.

Diversity, Diversity, Diversity

Caucasian males made up the first four classes. Two African American men graduated in 1960. There was a slight increase in the number of African American students in the late 1970s, but their numbers have declined since. The largest number, six, was in 1980, out of a class size of 62 or 10% of the class. There were five African American students in the Class of 1978. Edwin Marshall, IU Optometry Class of 1971 and an IU faculty member, has made several attempts to increase this number. According to Marshall, "The most notable program was the IU Summer Institute in the Health

Related Professions, which was a six week summer program that was conducted between 1973 and 1990. This program was very successful and was the major reason for the minority enrollment numbers in the '70s and '80s." An abbreviated version of the program has been proposed and is being reviewed by the IU administration. Marshall notes that one of the primary reasons for low enrollment is the lack of visibility of optometry in minority communities and among minority students. There has been an increase in the number of Asian and Asian American students since 2000. There were seven Asian and Asian American students in the Class of 2002, eight in the Class of 2003, and ten in the Class of 2004.

In-state/Out of state

A state university should educate its residents, but because there are only seventeen optometry schools in the United States, this is balanced with the need to educate out of state students. The percentage of in-state students has declined in recent years. It is noteworthy that as Canadian currency has weakened against the American dollar, the number of Canadian students enrolling at IU School of Optometry has dropped off dramatically.

What's your major?

A development that can hardly be considered surprising is that the undergraduate major of choice for entering students is biology. One likely explanation is that many of the School's prerequisite courses are in biology. It is also likely that the majority of undergraduate students and advisors see biology as the logical choice of majors for students wishing to go into any of the health care professions, not just medicine. The percent of students with bachelor's degrees entering IU School of Optometry has increased significantly, as is shown in Figure 2.

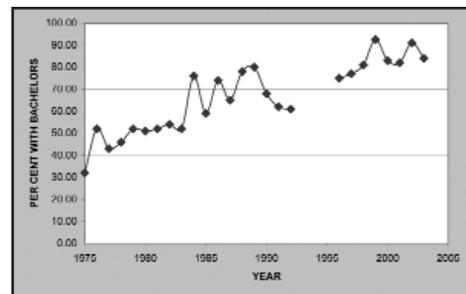


Figure 2. Percentage of students entering optometry school with bachelor's degrees.

Susan Kovacich is a graduate of the IU School of Optometry and has been a member of the faculty since 1998.

Books by Indiana University Optometry Faculty

David A. Goss, O.D., Ph.D.

A television public relations item produced for the Indiana University School of Medicine a few years ago proclaimed that their faculty wrote the books that other schools used. The same thing can be said about the Indiana University School of Optometry. IU Optometry faculty members have written a number of widely used textbooks and reference books. This is a compilation of books written by persons while they were serving on the School of Optometry faculty or after they have retired from IU. It does not include books written prior to serving on the IU faculty or after a move to another school. This list was compiled by use of personal books and files, by searches on the Indiana University IUCAT online library catalog, by searches on amazon.com and WorldCat, by use of the holdings of the IU Optometry Library, and by consultation with various faculty members. The list includes only professional books (at least two optometry faculty members have published novels!). This list is complete to the best of my knowledge, but I would appreciate being contacted if any authors have been overlooked so that there can be appropriate recognition in a future issue of the journal. The books are arranged in chronological order. For books which have gone through four or more editions, only the first and most recent editions published while the authors were at IU are listed.

Hofstetter HW. Industrial Vision. Philadelphia: Chilton, 1956.

Henry Hofstetter, the first director of the optometry program and an IU faculty member from 1952 to 1979, wrote this book to fill a need at that time. The 189 page book covers industrial eye hazards and protection, vision testing in industry, the relation of vision to industrial efficiency, and compensation for loss of vision in industry.

Schapero M, Cline D, Hofstetter HW. Dictionary of Visual Science. Philadelphia: Chilton, 1960.

While serving as the Director of the IU Division of Optometry, Henry Hofstetter (1914-2002) co-edited this useful dictionary. Five editions of this book have been published, the most recent in 2000. The second edition was published in 1968 with Schapero, Cline, and Hofstetter again as editors. The third and fourth editions were published in 1980 and 1997, both with Cline, Hofstetter, and J.R. Griffin as editors. Max Schapero (1921-1972)

was a professor at Southern California College of Optometry. David Cline (1910-1988) practiced optometry in Southern California. John R. Griffin has been a professor at Southern California College of Optometry for many years.

Trendelenburg W, Monjé M, Schmidt I, Schütz E. Der Gesichtssinn, Grundzüge der physiologischen Optik. Berlin: Springer-Verlag, 1961.

Ingeborg Schmidt (1899-1988), who received medical training in her native Estonia and in Germany, did extensive research in physiological optics both before and after she joined the IU optometry faculty in 1954. This 440 page book was published in German. This is the second edition of a book that had originally been written by Wilhelm Trendelenburg (1877-1946). The first edition was published in 1943.

Baldwin WR, Shick CR. Corneal Contact Lenses: Fitting procedures. Philadelphia: Chilton, 1962.

Bill Baldwin and Charles Shick are now retired after long and productive careers in optometry, but at the time of the publication of this book, Baldwin was Assistant Professor of Optometry and Shick was Instructor in Optometry in the IU Division of Optometry. This 144 page book covers specifications of corneal contact lenses, checking finished lenses, patient adaptation, symptomatology, procedures in special cases, and lens modification. Seven appendices include sample recording and ordering forms, tables, and formulas.

Hofstetter HW. Optometry: Professional, Economic, and Legal Aspects, reprinted edition. St. Louis: American Optometric Association, 1964.

This is a reprint of the book first published in 1948. The publisher of the original printing was Mosby of St. Louis. The book offers comprehensive coverage of topics relating to the subtitle of the book, including, for example: historical background of optometry, legal status, licensure and board examinations, reciprocity, history of optometric degrees, governmental relations, ethics, types of practice, earnings and fees, optometrist-patient relations, office accounting, optometric organizations, international optometry, optometric

education, distribution of optometrists, scope of practice, manufacturers and distributors, relation to other professions, prevalence of visual anomalies, and public health issues.

Gregg JR, Heath GG. The Eye and Sight. Boston: Heath, 1964.

This is a softcover 136-page popular science book on the eye and vision. Topics include structure and growth of the eye, optics of the eye, refractive error, retina and visual pathways, retinal photochemistry, electrophysiology, ocular motility, visual acuity, and color vision. At the time this book was published, Gordon Heath was Associate Professor in the IU Division of Optometry. His co-author was James Gregg, Professor of Optometry at Los Angeles College of Optometry.

Le Grand Y. Form and Space Vision. translated by Millodot M, Heath GG. Bloomington: Indiana University, 1967.

The noted French vision scientist Yves Le Grand wrote a three volume work, *Optique Physiologique*, in which this is the third volume. It was first published in France in 1956. It was translated by Michel Millodot, who received his M.S. degree in physiological optics from IU in 1965, and Gordon Heath, long-time IU optometry professor and Dean.

Borish IM. Clinical Refraction, 3rd ed. Chicago: Professional Press, 1970.

For a number of years, this was probably the most widely used reference book in optometry. After leaving the faculty of the Northern Illinois College of Optometry in 1944, Irvin M. Borish set up a



Dan Gerstman gets a book signed by Irv Borish

private practice in Kokomo, Indiana. He started serving IU as a part-time faculty member in 1955, and he was a member of the full-time faculty at IU from 1973 to 1983. In 1938, Borish published a book entitled *Outline of Optometry*, which was a presentation of much of the optometric knowledge at the time in outline form. That book was revised and supplemented and published as the first edition of *Clinical Refraction* in 1949. The second edition of *Clinical Refraction* was published in 1953. For the preparation of the third edition, Borish enlisted the help of 19 co-authors and collaborating editors. The second edition was 576 pages, but the third edition expanded to 1381 pages. The third edition retained the outline format that the previous

editions had used. The five sections of the third edition are refractive status of the eye; preliminary and adjunct examination; refraction; analysis and prescription; and monocularly and strabismus. The third edition was first published in one volume in 1970, and a two volume version was issued in 1975. In 1998, sixty years after the publication of *Outline of Optometry*, an entirely new book entitled *Borish's Clinical Refraction* was published. The book was edited by William J. Benjamin of the University of Alabama Birmingham. This 1255 page book consists of 33 chapters written by 46 contributors. Borish served as a consultant and contributing author on this work. Unlike its namesake, it is not in outline form; but like its namesake, it is a valuable reference book.

Allen MJ. Vision and Highway Safety. Philadelphia: Chilton, 1970.

Merrill Allen, who was a faculty member at IU from 1953 to 1987, did extensive research on vision and driving. This book covers the nature of the driving task, vision requirements for driving, space perception and driving, vision tests, prescribing for driving, drivers with special visual problems, visual hazards in the driving environment, and various misconceptions about vision and driving. It includes an extensive 33-page bibliography, over a page and a half of which lists publications by Allen.

Pierce JR, Levene JR. Visual Science: Proceedings of the 1968 International Symposium. Bloomington: Indiana University Press, 1971.

Jack Pierce was a faculty member at IU from 1964 to 1970 and John Levene from 1967 to 1975. This is a volume of the proceedings of a visual science symposium held April 2-4, 1968, in conjunction with the ceremonies for the dedication of the new optometry building. This 408 page book includes the papers of 27 contributors from six countries. The papers were organized into four sections: physiological aspects, neuropsychological and behavioral aspects of color vision, behavioral aspects, and clinical and applied aspects of visual science. The book contains contributions from many well-known vision scientists, and includes a paper by George Wald, winner of the 1967 Nobel Prize for medicine and physiology.

Schmidt I, Reading R, Strickland J, Gerstman D, Pietsch P, Chang F. Optometry Examination Review Book. Flushing, NY: Medical Examination Publishing Co., 1973.

This is a book consisting of multiple choice questions and answers on various topics relating

to optometry. At the time of its publication, Rogers Reading, Jerald Strickland, Dan Gerstman, and Paul Pietsch were all members of the IU faculty, Ingeborg Schmidt was retired from the IU faculty, and Freddy Chang was a graduate student in physiological optics at IU. A second volume of the book was published in 1975, with Gerstman and John R. Levene as authors. A second edition was published in 1978, with Dan Gerstman as the editor and Freddy Chang, Gerstman, Paul Pietsch, and Ingeborg Schmidt as contributors. The third edition was published in 1986. The authors of the third edition were Linda Casser-Locke, Freddy Chang, Dan Gerstman, and Paul Pietsch. The most recent edition is the fourth edition published in 1994.

Brooks CW, Borish IM. System for Ophthalmic Dispensing. Chicago: Professional Press, 1979. Clifford Brooks and Irvin Borish, both long-time IU faculty members, teamed to produce this practical book. Topics include frame selection, multifocal measurements, ordering of spectacles, verification, dispensing, frame adjustments and repairs, and ophthalmic optics. A second edition was published in 1996.

Pietsch P. Optometric Histology Manual. Bloomington, IN: Publications Press, 1979. In the more than twenty years that Paul Pietsch was on the IU Optometry faculty, he was known for innovative methods of teaching histology and neuroanatomy. Before coming to the IU School of Optometry, he had previous experience teaching medical and dental students. This book is a histology laboratory manual he wrote specifically for optometry students. The International Standard Book Number (ISBN) for this book is 0-89917-336-5.

Pietsch P. Shufflebrain. Boston: Houghton Mifflin, 1981. Paul Pietsch came to IU in 1970 and retired from the faculty in 1994. This 273 page book, written largely for lay persons, explores his theory of the storage of memories, which suggests that the brain encodes memories in a manner similar to the formation of a holographic three-dimensional image. The author discusses his experiments with salamander larvae, and in so doing gives the reader an appreciation for the triumphs and frustrations of scientific experimentation. The book contains a good description of the mathematics of holography for the non-mathematician.

Brooks CW. Essentials for Ophthalmic Lens Work. Chicago: Professional Press, 1983. Cliff Brooks, a 1971 IU optometry graduate and an IU faculty member since 1974, is well known for his practical clearly written books on ophthalmic lenses. This book is a detailed instruction book on the principles of lens finishing in an ophthalmic laboratory. A second edition was published in 2003.

Reading RW. Binocular Vision: Foundations and Applications. Boston: Butterworths, 1983. Rogers Reading, who earned both his optometry and Ph.D. degrees from IU, was a faculty member at IU for over thirty years, beginning in 1964. This book was written as a textbook for a course he taught, Binocular Sensory Aspects of Vision. Among the topics covered in the book are spatial sense, fusion, suppression, rivalry, binocular summation, corresponding points, stereopsis, Panum's space, horopters, neural aspects of binocular vision, aniseikonia, anomalous correspondence, and development of binocular vision.

Vision Science Symposium: A Tribute to Gordon G. Heath. Bloomington: Indiana University, 1988. In September of 1988, a symposium honoring Gordon Heath and his contributions to the graduate program in physiological optics was held on the Indiana University campus. Papers were given by fourteen graduates of the IU physiological optics graduate program. This volume is a collection of those papers.

Fingeret M, Casser L, Woodcome HT. Atlas of Primary Eyecare Procedures. Norwalk, CT: Appleton & Lange, 1990. This book explains how to perform eighty different eye health examination procedures. The book is 300 pages long. The procedures are organized into ten sections: ophthalmic pharmaceutical procedures, slit lamp biomicroscopy and adjunct procedures, eyelid, lacrimal system, conjunctival procedures, corneal procedures, ocular laboratory, posterior segment, physical examination, and preoperative and postoperative cataract procedures. Each procedure is illustrated by a series of figures on right hand (odd-numbered) pages. The facing pages contain corresponding text with explanation, description, technique, and interpretation of the test, as well as the indications and contraindications for the test. Linda Casser was on the IU faculty from 1984 to 1997. Her co-authors, Murray Fingeret and H. Ted Woodcome,

were from New York.

Newcomb RD, Marshall EC. Public Health and Community Optometry 2nd ed. Boston: Butterworths, 1990.

Edwin C. Marshall has been a member of the IU faculty since 1971. He is very active in national public health organizations and holds an M.P.H. degree from the University of North Carolina in addition to his O.D. and M.S. degrees from IU. Twenty-eight authors contributed to this 408 page book edited by Robert D. Newcomb of Ohio State University and Marshall. The book is organized into four parts: Foundations of Public Health, Basic Sciences of Public Health, Management of Public Health Programs, and Delivery of Optometric Services. The first edition of the book was published in 1977, with Newcomb and Jerry L. Jolley serving as editors. Marshall was one of the 34 contributors for the first edition.

Grosvenor T, Flom MC, eds. Refractive Anomalies: Research and Clinical Applications. Boston: Butterworth-Heinemann, 1991.

This book summarized much of the research and knowledge of the etiology, epidemiology, natural history, and management of refractive errors at the time. Its 433 pages include 24 chapters by 27 contributors. Ted Grosvenor was a full-time faculty member at IU from 1974 to 1977 and a part-time member of the IU faculty from 1989 to 2000. His co-editor, Merton Flom, was a long time member of the faculty at the University of Houston. Grosvenor wrote two books before joining the IU faculty in 1974: Contact Lens Theory and Practice (1963) and Contemporary Contact Lens Practice (1972).

Brooks CW. Understanding Lens Surfacing. Boston: Butterworth-Heinemann, 1992.

This book by Cliff Brooks is a 399-page training and reference text for opticians and opticianry students. It explains the concepts and practical methods of lens surfacing. Topics include layout of different types of lenses, tool curves, lens thickness, blocking and cribbing, generating, lap tools, fining and polishing, deblocking, verification, high powered lenses, progressive addition lenses, and prism considerations. The book contains eight appendices, a twelve-page glossary, and questions and problems at the end of each chapter.

Brooks CW. Lens Surfacing Handbook. Boston: Butterworth-Heinemann, 1992.

This book is a 138-page manual for use by working opticians. Topics covered include general lens

considerations, surfacing layout, tool curves, lens thickness, aspects of completing the job, and special cases in surfacing. There are 15 appendices which contain tables and charts for reference. It is a companion book to Brooks's Understanding Lens Surfacing.

Casser L, Chang FW, Gerstman DR, Pietsch PA, Bradley A. Optometry Examination Review, 4th ed. Norwalk, CT: Appleton & Lange, 1994.

This book contains 1,000 multiple choice questions with an answer and discussion for each question. The book was written for students and optometrists preparing for national and state licensure examinations. The questions are arranged into ten sections: human biology; ocular/visual biology; theoretical, ophthalmic, and physiological optics; psychology; systemic conditions; ocular disease/trauma; refractive/oculomotor/sensory integrative conditions; perceptual conditions; public health; and clinicolegal issues. There is list of reference books at the end of section. At the time of publication of this book, four of the five authors were members of the IU faculty (Casser, Gerstman, Pietsch, and Bradley). Chang served on the IU faculty from 1977 to 1987. The first edition of this book was published in 1973.

Brooks CW. Understanding Lens Surfacing Laboratory Exercises: A Laboratory Manual in Lens Surfacing. Boston: Butterworth-Heinemann, 1995.

This is another of the textbooks on ophthalmic lenses written by Cliff Brooks. This is a laboratory teaching manual. It can be used in conjunction with Brooks's Understanding Lens Surfacing.



Cliff Brooks with some of the books that he has authored

Goss DA. Ocular Accommodation, Convergence, and Fixation Disparity: A Manual of Clinical Analysis, 2nd ed. Boston: Butterworth-Heinemann, 1995.

This 222 page textbook is an introduction to the clinical analysis of accommodation and vergence disorders. Topics covered include calculation of AC/A ratios, characteristics of the zone of clear single binocular vision, Duane's binocular vision syndromes, rules of thumb for evaluating strain on fusional vergence, Morgan's norms, fixation disparity and associated phorias, vergence case types and their management, presbyopia,

accommodation tests, nonpresbyopic accommodative disorders, a basic introduction to vision training for vergence and accommodation disorders, and vertical imbalances. The first edition of this book was written while the author was on the faculty at Northeastern State University in Oklahoma. This edition was written after he joined the IU faculty in 1992.

Fannin TE, Grosvenor TP. Clinical Optics, 2nd ed. Boston: Butterworth-Heinemann, 1996.

This 420-page book covers the optics of ophthalmic lenses and the lens-eye combination. Questions and problems are found at the ends of the chapters. Grosvenor's co-author was a long-time faculty member at the University of Houston College of Optometry. The first edition was published in 1987, when they were both on the faculty at University of Houston.

Grosvenor T. Primary Care Optometry: Anomalies of Refraction and Binocular Vision, 3rd ed. Boston: Butterworth-Heinemann, 1996.

The 17 chapters of this book are divided into three parts: anomalies of refraction and binocular vision, the optometric examination, and optometric diagnosis and management. Included among the 665 pages of this book are a 17 page glossary and 28 pages of references. Grosvenor is often feted for the clarity and economy of his writing, and this book is a good example of why. In the September, 2003 issue of *Clinical and Experimental Optometry*, J. Graham Strong wrote that "Grosvenor writes with a seasoned eloquence that tames even the most complex topics, making the material easily understandable by any serious reader." (page 348) The first edition of this book was published in 1982, when Grosvenor was at Houston. However, much of the writing of the first edition was done while he was at IU. From 1975 to 1978, he wrote over 100 articles for the *Optometry Reconsidered* column in *Optometry Weekly*, and those articles were incorporated into the first edition of the book. The second edition was published in 1989.

Allen MJ, Abrams BS, Ginsburg AP, Weintraub L. Forensic Aspects of Vision and Highway Safety. Tucson, AZ: Lawyers & Judges Publishing, 1996.

This book contains eleven chapters by Merrill Allen updating his 1970 book on vision and highway safety plus 14 additional chapters by his co-authors. The emphasis of the new chapters is on forensic aspects.

Brooks CW, Borish IM. System for Ophthalmic

Dispensing, 2nd ed. Boston: Butterworth-Heinemann, 1996.

The first edition of this book was published in 1979. Like the previous edition, this edition covers frame selection, multifocal measurements, ordering of spectacles, verification, dispensing, frame adjustments and repairs, and ophthalmic optics. It is widely used as an optometry textbook.

Casser L, Fingeret M, Woodcombe HT. Atlas of Primary Eyecare Procedures, 2nd ed. Stamford, CT: Appleton & Lange, 1997.

This book was published in Linda Casser's last year at IU before she went on to join the faculty at Pacific University. The first edition was published in 1990. This edition enrolled four contributors along with the original three authors. This book contains sixteen pages of color plates, eight more than the first edition. The format is like the first edition with an expansion to 103 procedures described on 494 pages. Added material in this edition includes description of cranial nerve examination, glaucoma evaluation and treatment, periocular injections, ophthalmic laser procedures, and infection control.

Lowther GE. Dryness, Tears, and Contact Lens Wear. Boston: Butterworth-Heinemann, 1997.

Gerald Lowther has been a faculty member at IU since 1994 and Dean of the School of Optometry since 1998. This 105 page book is a clinical reference book on the diagnosis and management of dry eye and related contact lens problems. The book includes eight pages of color plates. The emphasis of the book is on tear film problems in hydrogel lens wearers. It is part of the *Clinical Practice in Contact Lenses* series edited by Lowther and Charles D. Leahy of New England College of Optometry.

Grosvenor T, Goss DA. Clinical Management of Myopia. Boston: Butterworth-Heinemann, 1999.

This 227 page book is divided into two parts: general principles and methods of myopia control and reduction. The chapters in the first part are epidemiology of myopia, etiology of myopia, clinical examination, and prescribing for myopia. The chapters in the second part are vision therapy, control with added plus power for near work, myopia control with pharmaceutical agents, corneal topography measurement, myopia control or reduction with rigid contact lenses, keratorefractive surgery, and refractive surgery involving the lens.

Hofstetter HW, Griffin JR, Berman MS, Everson RW. Dictionary of Visual Science and Related Clinical Terms, 5th ed. Boston: Butterworth-Heinemann, 2000.

This is the fifth edition of the successful dictionary first published in 1960. Henry Hofstetter is the only person to serve as an editor on all five editions. Joining him as an editor on this edition was Ronald Everson, who was a faculty member at IU from 1961 to 1964 and from 1968 to 1996. The other editors are John Griffin and Morris Berman, both of Southern California College of Optometry. As with the previous editions, a long list of contributors assisted in checking, revising, and composing definitions. This 630 page book contains definitions of about 25,000 terms. There are forty tables of reference information in an appendix at the end of the book.



Theodore Grosvenor performing slit lamp biomicroscopy

Grosvenor T. Primary Care Optometry, 4th ed. Boston: Butterworth-Heinemann, 2002.

This is the fourth edition of Grosvenor's classic book. It contains information on the characteristics and etiology of refractive

anomalies, characteristics of binocular vision conditions, optometric testing procedures, management of refractive and binocular vision problems, myopia control, characteristics of ophthalmic and contact lenses, and overviews of various other topics, including low vision, orthokeratology, and refractive surgery.

Grosvenor T. The Myopia Epidemic: Nearsightedness, Vision Impairment and Other Vision Problems. Ferndale, WA: Twenty Twenty Publications, 2002.

This 230 page softcover book is written for lay persons or beginning optometry or technician students. A little less than half of the book is devoted to myopia. Other topics discussed include basic optics of the eye and lenses, hyperopia, astigmatism, vision impairment, low vision care, and prevention of vision problems.

Goss DA, West RW. Introduction to the Optics of the Eye. Boston: Butterworth-Heinemann, 2002.

This 234 page book covers a basic review of geometrical and physical optics, basic optics of the eye, characteristics of the retinal image, ocular biometry, optics of refractive error measurement and management, refractive error development,

optics of accommodation, a history of developments in clinical visual optics, and biographical sketches of persons who made classical contributions to visual optics. Before David Goss joined the IU faculty in 1992, one of the courses he taught at Northeastern State University College of Optometry was optics of the eye. His co-author, Roger West, currently teaches geometrical, physical, and visual optics at Northeastern State University.

Brooks CW. Essentials of Ophthalmic Lens Finishing, 2nd ed. St. Louis: Butterworth-Heinemann, 2003.

The first edition of this book was published in 1983. This second edition has 400 pages. Topics included are lens decentration, lensometry, lens inspection, lens patterns, frame dimensions, edgers, grinding and polishing lenses, tinting, lens insertion, impact resistance, and equipment maintenance. A review of the book states that it "should be the standard for educational programs that teach lens finishing." (Optom Vis Sci 2004;81:397)

Grosvenor T. Vision After 50: Preventing Age-Related Vision Loss. Ferndale, WA: Twenty Twenty Publications, 2004.

The intended audience for this 155 page soft cover book is the lay public. The ten chapters are entitled: What changes in vision can we expect after 50, Age-related vision loss, Age-related macular degeneration, Age-related cataracts, Glaucoma, Diabetic retinopathy, Vision loss due to complications of myopia, Other causes of age-related vision loss, Optical aids for age-related vision loss, and Vision and driving after 50. Appendices include some background information to help understand human vision and vision conditions in children. A 22-page illustrated glossary concludes the book.

History of the Two-Year Associate of Science Degree Program at the IU School of Optometry

by *Sandi Corns Pickel, A.S., B.G.S., Clifford W. Brooks, O.D., and Jacqueline S. Olson, M.A.*

Beginnings

In February 1967, the IU Dean of Faculties approved an Associate of Science degree program for optometric assistants on the Bloomington campus according to a memo dated February 24, 1970 from John Mee, Dean of General and Technical Studies, to Chancellor John W. Ryan. The 1970 memo stated, "Lack of funds prevented initiating the program; however, the Director and Faculty of the Division of Optometry have offered to share the load of offering the program. Our discussions with representatives of the Division of Optometry, indicate that the program can be offered on a pilot basis, with limited enrollment and at no direct expenditure of funds." In a memo dated March 9, 1970, Robert Cable, O.D., Chairman for the American Optometric Association (AOA) Committee on Optometric Assistants, Technicians, and Technologists, wrote Spurgeon Eure, O.D., President of the Association of Schools and Colleges of Optometry (ASCO), and Charles Seger, O.D., Chairman of the Council on Optometric Education (COE). In his memo, he outlined the concern that "a near crisis in delivery of visual care can occur within this decade unless our schools and colleges of optometry actively take the lead in projecting the concept of utilization of allied optometric personnel."¹

Consequently, Jerald W. Strickland and Gordon Heath worked on initiating the plans for an optometric technician program at IU to begin in the fall of 1971 as a small one-year pilot program.² Strickland was also the Chair of the AOA Optometric Technology Committee, so his background helped in the curriculum development. The Indiana Optometric Association was helpful in moral support and student recruitment.

Strickland worked with Vernon Broertjes, Ed. D., Director of Instructional Programs in IU's Division of General and Technical Studies (DGTS), and the new program was offered through DGTS. Strickland recalls that university support and HEW grants after the initial year were keys to the success of the early years of the program.² Federal dollars helped with lab renovation and acquisition of ophthalmic and audiovisual equipment. All of the equipment was shared with the doctor of optometry students.

Program Development

Jerald Strickland became the first Director of the Optometric Technician Program. Linda Hancock (Alice Bennett's sister) was Admissions secretary at that time. Together, they admitted the first class of six students to begin a pilot program consisting of a one calendar year optometric technician curriculum to start in fall 1971 and finish in August 1972. In order for the students to receive a two-year Associate of Science degree within one calendar year, a prerequisite for admission was to have completed at least one academic year of college general education classes.

After this first year, the plan was to offer the program in the traditional two-year format with general education classes integrated with the technical courses. With that change, students were able to enter the program without previous college work. The initial curriculum was composed of 7 credit hours of basic visual sciences, 4 credit hours of English and speech, 6 credit hours of social and behavioral sciences, and 36 hours of technical ophthalmic courses.³

In the mid-seventies, there were further changes to the program. The offering of summer courses allowed students to continue throughout the summer after their first year and graduate in December instead of the following May.

In May of 1978, there was an administrative change in the awarding of the degree. The School of Optometry began awarding the Associate of Science degree instead of the Division of General and Technical Studies (DGTS).

In 1980, in order to round out program offerings and help meet the need for opticians with expertise in optical laboratory practice, a separate Optician Program was established. The first Optician class graduated in 1982. During those years and immediately following, the School of Optometry obtained a series of grants that enabled it to equip and run a complete surfacing and finishing teaching laboratory. This facility provided practical experience for optician students, and both service and savings for school clinics.

Early in 1987, a special task committee was appointed by Dean Gordon Heath to help evaluate and guide the future of the programs⁴ (see

Appendix 4 for a list of the members of the committee). Clifford Brooks and Sandi Pickel prepared an extensive self-study document outlining the details and status of the programs. The committee initially met on Saturday May 1, 1987 at the Radisson Hotel in Indianapolis in conjunction with the Indiana Optometric Association's spring meeting. There was much discussion about the merits of the programs, topics taught, staffing needs, expectations of employers, salaries of graduates, and future trends.

A second meeting lasting nearly five hours took place the evening of Thursday, May 14, 1987. The committee outlined five recommendations with the most significant being "that the existing curriculum immediately be restructured so as to combine the two courses of study into a high quality unified offering that would be operative in the fall of 1987-88 and require less total time of enrollment for students."⁴

The committee presented its final report to Dean Heath at 6:30 pm on Wednesday, June 10, 1987 in the faculty lounge at the School of Optometry. The committee knew it was an earth-shaking event when the conference table began to tremble from a rare Southern Indiana earthquake! Discussions from that meeting resulted in a decision to combine the two separate programs into one single program. The combined program was named the Optician/Technician Program. An "Optician's Laboratory Concentration" was incorporated as an option for those who wanted to gain knowledge of and expertise in an optical laboratory. A separate certificate is awarded for those completing this optional part of the program.

Currently, the program includes courses in anatomy and physiology of the eye, ophthalmic optics, office procedures, ophthalmic procedures, ophthalmic dispensing, lens surfacing, lens finishing, and contact lenses. General education



courses include English, first aid, and a natural and mathematical science or social and historical studies elective.⁵ The clinic practicum portion consists of 450 clinical contact hours. Those electing to take the "Optician's Laboratory Concentration"

will complete 252 hours in the IU School of Optometry optical laboratory.⁶

The number of graduates in each class has varied over the past 32 years.⁷ A total of 611 people have earned the Associate of Science degree. Out of that number, 121 earned the optician degree during 1980-1988 era. Of those 121 students, 87 completed both the technician program and optician program and earned two separate associate of science degrees. To date, 91 have completed the optional "Optician's Laboratory Concentration".⁷

Memories of the First Graduating Class



Clinic Staff June 1976:

*Front row (l to r): Gail Cohen, Barb Oing, Susie Bagby, Carol Czynzowski
Middle row (l to r): Teresa Richardson, Judy Werner
Back row (l to r): Susie Stephanich, Sonya Jackson, Joann Cook, Nell Kelley*

Sandra Corns Pickel was a member of the very first class to graduate from the program and gives the following personal look into what it was like:

The students in that first class were Marianne Blue Miller, Sandra Corns Pickel, Patricia Alder Cukrowicz, Suzanne Klingler Hickey, Mary Lutz Baker, and Jacquelyn Gilmer Blonder.

During the program, Suzanne and Marianne were employed part-time by Charles Shick, O.D., in his private practice in downtown Bloomington. After graduation, Mary, Pat and Sandi were employed by the IU School of Optometry clinic at \$2.56 an hour. It was a huge step for the clinic to more than double its support staff from the existing two, Dorothy Jones and Nell Kelley. Suzanne moved to Terre Haute and was employed by Drs. Conner and Conner, and later by Gary Nesty, O.D. in Brazil, Indiana. She currently works as a team leader of the optical shop supervising five opticians and one optical assistant for Associated Physicians and Surgeons Eye Clinic in Terre Haute. Mary worked in the clinic while her Wisconsin high school sweetheart, Bob Baker, was

completing the doctor of optometry program. They married and settled in Michigan and currently reside in Iron Mountain, Michigan. Mary worked in Bob's office as an optometric technician until they started a family. Mary is currently a mosaic artist. Marianne continued to work for Dr. Shick full-time for about a year after she graduated from the program. She then moved home to Ft. Wayne and worked in a Bausch & Lomb contact lens lab. Pat married optometry student Don Cukrowicz, and she worked in the optometry school clinic until he graduated in 1973. Jackie Blonder and her husband, doctor of optometry student Barry Blonder, started a family and she was not seeking employment.

The faculty of record listed as teaching the courses the first year the program was offered were Jack Bennett, Paul Pietsch, Rogers Reading, Charles Shick, and Jerald Strickland.⁸ However, it was often a cooperative effort with many others from the doctor of optometry faculty pitching in to help teach the classes. Although not faculty, apprentice-trained optician Paul Hunter (clinic staff 1971-1975) was very instrumental in teaching the hands-on skills in the clinic dispensary to technician as well as doctor of optometry students.

A few months ago, Sandi Pickel interviewed Suzanne Hickey for this article.⁹ We reminisced over lunch about the year together in the program. We laughed about the good times and discussed how lucky we were to have such renowned faculty to teach our classes. However, our contact lens class seems a bit barbaric - we actually fabricated scleral lenses by injecting a dental resin into a scleral mold placed on the eye. From that we made a plaster cast of the eye. With Mabel Nisted, an English-trained optometrist, lending her expertise, a plastic scleral lens was created. Even though this procedure was not common practice at the time (but great experience), it shows just how much the ophthalmic industry has changed over the years. Both of us talked about how the solid foundation we received in the program continues to serve us well, in spite of the many changes we experience on an on-going basis.⁹

L to R: Dr. Brooks, Janice LeDrew Besson, Dr. Strickland, Sandra Corns Pickel, and Dr. Grosvenor



Administration of the Program

Directors:

Jerald Strickland, O.D., 1971-1974, Theodore Grosvenor, O.D., 1974-1977, Clifford Brooks, O.D., 1977- current

Associate Directors:

Janice LeDrew Besson, O.D., 1972-1974, Clifford Brooks, O.D., 1974-1977, Sandra Corns Pickel, A.S., B.G.S., 1977- current

Program Faculty

The following list of IU optometry faculty represents those who have taught in the associate of science degree program at some time during the period of 1971 through 2004. This list has been compiled from various records in the School of Optometry; attempts have been made to make this list as accurate as possible. Inadvertent omissions are due to the varying nature of the available records:

Jack Bennett, Irvin Borish, Clifford Brooks, Robert Carter, Daniel Gerstman, Theodore Grosvenor, Charles Haine, Henry Hofstetter, Douglas Horner, Patricia Keech, Susan Kovacich, Janice LeDrew Besson, Thomas Madden, Edwin Marshall, Sandra Corns Pickel, Paul Pietsch, Robert Pollock, Rogers Reading, Elaine Rivron, John Ross, Charles Shick, William Somers, P. Sarita Soni, and Jerald Strickland.

Accreditation¹⁰

The Optician/Technician Program is accredited currently by two different accrediting bodies; optometry's Accreditation Council on Optometric Education (ACOE) and opticianry's Commission on Opticianry Accreditation (COA).

The Optometric Technician Program obtained its first accreditation from the American Optometric Association Council on Optometric Education (now called Accreditation Council on Optometric Education) in 1972. Ralph Vasa, O.D. and Charles Lile, M.Ed., conducted the site visit October 23-26, 1972. Subsequent accreditation site visits were September 18-19, 1978, December 5, 1983, December 7, 1989, February 21-22, 1994, and April 19-20, 2001.

The first site visit for the Commission on Opticianry Accreditation (COA) was March 8-10, 1999. They granted full accreditation for 6 years. The program will have its second site visit for re-accreditation in March 2005.

Advisory Committee¹¹

An initial advisory committee was formed when the program was developed. It was composed of three members: a recent graduate of the program,

an established optometric practitioner, and an educator. After a period of inactivity, the committee was expanded and started to meet on a regular basis in 1979. The advisory committee currently consists of two practicing optometrists, a graduate of the program, the president of the Indiana Paraoptometric Organization, a representative from the Opticians Association of Indiana, the first and second year technology student class presidents, the dean of the Optometry School, the program director, and associate director. The committee meets twice a year.

Many people have volunteered their time to serve on this committee, including student representatives who are not included in the list.

This list represents both current and past members of the committee:

Sue Avery, Tim Bayless, John Corbin, O.D., Kelly Cunningham, O.D., Jennifer Edgington, Dan Federspill, Bert Happel, O.D., Vivian Hardacre, Vicki Hitzeman, Daryl Hodges, O.D., Peggy Hofmeyer, Michael Hopkins, Tammy Litchfield, Janna McCan, Carol Mowrer, John Oliver, Debbie Runyon, Dana Selch, Debra Seward, Cory Shaffer, O.D., Terry Sitzer, Bessie Smith, Jim Sowders, O.D. *Exofficio Members:* Dr. Jack Bennett, Dean; Dr. Clifford Brooks, Director; Mrs. Sandra Corns Pickel, Associate Director; Dr. Gerald Lowther, Dean; Ron Jensen, Assistant to the Dean

Continuing Education

The need for paraoptometric education for those in the workforce has increased steadily. Doctors delegating duties more extensively, more frequent personnel changes, and growth of group practices have all created a tremendous need for education for the paraoptometric. The Optician/Technician program faculty worked to create a series of continuing education courses that were structured around the content of the Optician/Technician program curriculum. The programs have been taught in Indiana, Illinois, Florida, California, Pennsylvania, Maryland, Minnesota, North Carolina, Texas, Massachusetts, and New Jersey. The courses are often taught by faculty from other optometry schools when courses are offered in distant locations. The initial plan called for five tracks and was first offered at EyeQuest in May 1999. The next phase consisted of developing a second level in all of the same areas except the anatomy and physiology of the eye. A third level is under development.

First Scholarship Established for Technology

Students

In 2001 the first scholarship was established in honor and memory of Robert G. Corns, O.D. He was the father of Sandi Corns Pickel and a great leader within the field of optometry. He passed away in October 26, 2001 after battling cancer.

Appendixes

The lists in Appendixes 1-4 has been compiled from various records in the School of Optometry. Attempts have been made to make the lists as accurate as possible. Inadvertent omissions are due to the varying nature of the available records.

Appendix 1

Graduates of the A.S. Program Currently Employed by IU School of Optometry^{12,13}

<u>Class</u>		<u>Hire Date</u>
1988	Adams, Lori (Shelton)	7/29/91
2003	Barksdale, Jami	9/27/04
2000	Biehl, Trina	8/24/00
1979	Boyer, Judith (Bechtold)	9/8/81
1994	Carter, Donna (Wargel)	2/25/97
1975	Chandler, Gail (Cohen)	1/19/04
	previous	8/24/75-8/3/77
1992	Cornett, Michelle	8/16/93
1978	Dolan, Angie (Sorrells)	5/3/78
2000	Dunlap, Krisina	9/13/04
1999	Dyer, Ryan	5/17/99
1999	Harp, Julie (Taylor)	12/16/02
1995	Long, Virginia "Ginger"	8/9/99
1982	-tech/1983-optician	
	Marsh, Sharon (Ferguson)	7/5/83
1994	Matte, Kathy (Hayden)	9/12/03
1981	Michael, Ann (Wilson)	8/21/84
2000	Ng, Hennessy	12/3/03
2004	Stepnoski, Julie	9/1/04
2000	Turner, Antonio	
	(part-time, current OD student)	12/24/00

Appendix 2

Graduates of the A.S. Program who have been Employed Full-time by IU School of Optometry in the Past^{12,13}

Almond, Rose (Becker)	1985-1987
Ault, Lizabeth	8/24/85-7/1/8
Avery, Nancy Sue	8/20/84-3/9/87
Bagby, Susan	5/15/74-5/12/76
Best, Stacy	1995
Baugh, Rebecca	3/10/97-9/23/02
Billman, Kathleen	8/1/88-5/31/91
Button, Melissa	11/4/02-8/03
Carmichael, Belinda (Gunnerson)	8/27/79-11/16/83
Carron, Amanda	12/19/83-2/21/86

Chaffin, Julia	6/25/78-8/27/82
Chappell, Cheryl	1983
Chariton, Kathy	8/16/76-12/16/77
Clare, Dan	8/23/87-8/12/88
Cohen, Gail (Chandler)	8/24/75-8/3/77
	1/19/04-present)
Cornell, Tammy	3/8/99-4/13/0
Cukrowicz, Patricia	8/27/72-2/9/73
Duvall, Kathleen	9/17/79-1980
Ellis, Jill	7/1/82-12/7/84
Finch, Jill	1/26/04 -8/13/04
Ford, Kristin	5/25/90-3/1992
Gierut, Robert	1/3/93-6/18/99
Gillaspy, Barbara	9/3/84-5/30/86
Godlevske, Beth (Mowery)	3/1/04-9/17/04
Gomez, Luz	1/9/84-5/4/84
Graff, Lisa	10/4/82-4/29/83
Hallett, Leah (Deckard)	12/19/83-5/84
Hardesty, Danny	6/11/01-6/23/03
Horst, Shannon	10/8/87-8/25/89
Howard, Susan (Lehner)	8/15/73-7/4/75
Iles, Tammy	6/84-11/20/84
Ingram, Barb (Bucci)	10/2/77-1982
Isaacs, Amy (Silbermann)	8/4/80-4/30/82
Kessler, Vickie	6/11/78-8/10/79
Ketcham, Andrew	3/13/00-5/7/04
Lutz, Mary	10/1/72-1974
McElya, Betty "Jane"	11/3/86-9/87
Mudd, Jill (Mattingly)	8/15/88-4/14/93
Oing, Barb	7/7/75-6/18/76
Puckett, Denise	11/10/88-6/12/98
Ralston, Christopher	1/11/88-9/23/88
Richardson, Teresa	8/4/75-1978
Stephanich, Susan	5/15/74-5/14/76
Welling, Barbara	2/8/88-4/13/90
Werner, Judith	8/2/73-3/4/77
Woolery, Nancy (Zaranka)	9/17/79-11/21/83

Appendix 3

Graduates of the Associate of Science degree that also completed the Doctor of Optometry program at Indiana University¹⁴

It is not unusual for students going through the Optician/Technician Program to develop enough interest in eye and vision care that they are motivated to further their education and to become optometrists. This is a list of graduates of the A.S. degree program who have gone on to complete the doctor of optometry program at Indiana University: Susan Bright, Dan Clare, Kelly Cunningham (Fuller), Ganhan Ewers (Overmyer), Sarah Huseman, Kathleen Kelley, Julie Kocher, Michael McCoy, Julie Sawyer (Barrow), Annette Zehner

Graduates currently in the Doctor of Optometry program:

Michelle Frye and Antonio Turner

Appendix 4

Technology Programs Special Review

Committee:

Dr. Ron Jensen (Chair), Dr. Cory Shaffer, Dr. Ed Miller, Dr. Bill Somers (faculty)

Program Advisors to the Committee:

Dr. Clifford Brooks, Mrs. Sandi Corns Pickel

Special Advisors to the Committee:

Dr. John Corbin, Dr. Daryl Hodges, Mrs. Debra Seward

References

1. Memo from optometry historical files.
2. Sandi Pickel's interview via email with Dr. Jerald Strickland, June 10, 2004.
3. Indiana University Division of Optometry Bulletin, 1972-73.
4. Jensen R. Report of the Special Review Committee: Optometric Technology Program, memo to Gordon Heath with committee report attachments, June 4, 1987.
5. Indiana University School of Optometry Bulletin, 2001-2003.
6. Optician/Technician Program Handbook, Fall, 2003.
7. School of Optometry Office of Student Administration A.S. records.
8. Alumni Composite photos.
9. Sandi Pickel's interview with Suzanne Hickey, December 10, 2003.
10. ACOE and COA Self-Study and Accreditation Reports.
11. Advisory Committee Minutes.
12. IU School of Optometry Human Resource files.
13. Indiana University Division/School of Optometry Directories, 1971-2003.
14. School of Optometry Office of Student Administration O.D. records.

Sandi Corns Pickel is Associate Director of the Optician/Technician Program and has been a faculty member since 1976. Clifford Brooks is Director of the Optician/Technician Program and has been a faculty member since 1974. Jacqueline Olson is Associate Director of Student Services in the Office of Student Administration.

History of Binocular Vision and Vision Therapy Clinical Services and Curriculum at the Indiana University School of Optometry *by David A. Goss, O.D., Ph.D.*

Vision therapy has been an essential part of optometric care for decades.^{1,2} Over the years, vision therapy has been variously referred to as orthoptics, visual training, or vision training. This article will examine the history of the clinical education, clinical services, and didactic instruction in vision training/vision therapy offered at the Indiana University School of Optometry.

Clinical Instruction and Services

The school's clinic started operating in the fall of 1955 in Jordan Hall. The student clinicians seeing patients in the visual training clinic were directed by Gordon Heath,³ who joined the IU faculty in 1955. Heath also was the Clinic Director and taught both V554 Clinical Optometry III and V556 Clinical Optometry IV, which included didactic instruction in vision training as part of their content. In the fall of 1955, the charge to the patient for a half-hour vision training visit was \$1.

From 1957 to 1960, the "Visual Training Clinic" was scheduled for one afternoon per week and the person who oversaw it was Robert Mandell.⁴ Mandell was a physiological optics graduate student at the time. He received his M.S. degree in 1958 and his Ph.D. in 1962. Mandell later served for many years on the faculty of the University of California Berkeley and became well known for his corneal topography and contact lens research and for a widely used textbook on contact lenses.

The school's clinic moved from Jordan Hall to Foley House at 744 East Third Street in 1959.⁵ Vision training was done on the second floor of Foley House. There was space at Foley House for as many as about five vision training patients at a time, but one to three patients for each one hour time interval were more common.⁶ Patients were scheduled with a student clinician, and sometimes a student observer in addition. The student clinicians carried out the testing and training procedures, helped plan the individual patient training programs, and kept patient records. Most patient care activities remained at Foley House until the new building was occupied in the Spring Semester of 1968.

From 1960 to 1964, except for one semester, the faculty member supervising the "Visual Training and Orthoptics Clinic" was Ronald

Everson. Everson received his O.D. degree from Chicago College of Optometry in 1954. He earned his M.S. in physiological optics from IU in 1959, after serving as a U.S. commissioned Army optometry officer from 1954 to 1957. One of Everson's instructors in optometry school was Carl Shepard, who was a well known authority in binocular vision.^{7,8} Everson was a member of the full-time faculty from 1961 to 1964 and from 1968 to 1996. During most of his latter years on the faculty, Everson's primary responsibility was to teach physiological optics courses in ocular motility, visual optics, and ocular physiology. Everson recalls that during his days in the visual training clinic, it occupied two rooms on the second floor of Foley House.⁶ The larger room held a variety of equipment, including a phoropter, a Telebinocular, two Troposcopes, a Rotoscope (a haploscope that also stimulated circular versions), loose prisms, prism bars, Hering afterimage test apparatus, and Polaroid vectograms for convergence and divergence training. Various inexpensive instruments, such as mirror stereoscopes and aperture rule trainers purchased from the Bernell Company of South Bend, Indiana, were loaned to patients for at-home training. The smaller room was used for storage and had a Hess-Lancaster screen on one wall.⁶

In the Spring Semester of 1962, physiological optics graduate student Indra Mohindra supervised the visual training clinic. Mohindra completed her M.S. degree in 1962. Mohindra later taught at several optometry schools and developed a method of retinoscopy for infants and small children, which was used in published studies on refractive error distributions and changes.⁹⁻¹¹ The numbers of patients who underwent visual training in the school's clinic were 85 in 1962-63 and 112 in 1963-64.^{12,13}

In the fall of 1964, John R. (Jack) Pierce joined the faculty. Pierce received his O.D. degree from Pacific University in 1961, and did Ph.D. work in psychology at the University of Portland. He was placed in charge of the "Visual Training and Orthoptics Clinic". He also taught Physiological Optics III and IV and Clinical Optometry III and IV. In 1965, the vision training program had expanded to the point that it was necessary to obtain additional space in Wylie Hall to supplement the

allotted space on the second floor of Foley House. In 1965-66, equipment purchases for the clinic included "several eye-hand coordinators and flash trainers for the expanded visual training clinic" and a number of small items for use mostly in at-home training by patients.¹⁴ Pierce introduced some treatments such as binasal occlusion and some Optometric Extension Program (OEP) concepts into the curriculum.

Jack Pierce expanded the comprehensive postgraduate course that was offered in visual training. Starting with the 1956-57 school year, the Division of Optometry offered postgraduate courses to practicing optometrists. The courses were up to 25 clock hours in length and generally spread over eight to twelve weeks, given at various sites around the state. The course in contact lenses was the one in greatest demand, but among the offerings was a course entitled Visual Training and Orthoptics. Pierce expanded this course into three courses, one on learning problems, one on amblyopia and strabismus, and another on simple practical visual training. In the late 1970s these comprehensive postgraduate courses were discontinued, with shorter continuing education courses that provided credit for relicensure taking their place. Pierce left IU in 1970, and went to the University of Alabama Birmingham where he taught for many years. Pierce completed his Ph.D. in 1970 with a dissertation on the effect of low plus lenses on visual performance.¹⁵ Some of Pierce's subsequent clinical work involved the relationship of vision therapy and academic performance.¹⁶

Assisting Pierce in the Visual Training and Orthoptics Clinic from 1964 to 1967 was Rogers Reading.¹⁷ Reading completed optometry school at IU in 1957, after which he served in the military for three years as a commissioned optometry officer. He received his Ph.D. in physiological optics in 1968. He was on IU's faculty for over thirty years. Reading published a respected textbook on sensory aspects of binocular vision in 1983.

With Jack Pierce's departure in 1970, responsibility for the vision training clinic shifted to other faculty, one of whom was Merrill J. Allen. Merrill Allen (1918-2003) received his optometry degree in 1941, his M.S. in physiological optics in 1942, and his Ph.D. in 1947, all from The Ohio State University.¹⁸ He had joined the IU faculty in 1953. He had done extensive research in physiological optics, including various studies on accommodation and convergence, and he was becoming well known for his work on motorists' vision.^{19,20} Allen's approach to vision therapy

made use of original instrumentation that he developed and was influenced by his physiological optics background and by some of the behavioral optometry thinkers of the era.



Merrill Allen testing one of his training devices.

One instrument that Merrill Allen developed was the Translid Binocular Interactor (TBI).¹⁶⁻²⁰ It consisted of two alternating lights which were held in front of the two eyes, thus alternately stimulating each eye. Allen proposed that the TBI was useful for anti-suppression training. Allen also developed electrical instruments which alternately occluded the two eyes by means of a rotating sector disk or a double occluder which tilted back and forth. The former was called the Fusion-Aider.²²

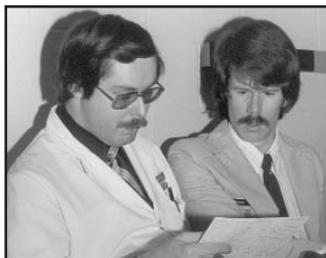
Ed Marshall, who was in the IU Optometry Class of 1971 and has been an IU faculty member for over 30 years, was in charge of the Visual Training Clinic for a year or two between his graduation and the shift in his clinical duties to the Community Eye Care Center.²⁶ Merrill Allen was the instructor for several courses that Marshall's optometry class took. His class was also heavily involved with Allen's initial testing of the TBI instrument. Marshall recalls that during his student days he also learned many concepts of classical orthoptics from English optometrists who were graduate students and visiting professors at IU, including David Austen, Ronald Mallett (of Mallett associated phoria testing fame), and Mabel Nisted.²⁶ Other noted vision therapy practitioners who were at IU for a period of time as visiting professors were American optometrist Jerome Rosner, Lionel Rose from Israel, and Peg Wood from New Zealand.^{8,26} Rose and Wood both received their optometric training in England.

Jess Boyd Eskridge, O.D., Ph.D., who had been clinic director at Ohio State, spent the 1971-72 year on the faculty at IU. He taught courses in the binocular vision area and consulted in the Vision Training Clinic on difficult cases. Eskridge was known for his ability to apply solid scientific principles to practical clinical applications. He appears to be the person who originated the use of a near point target on a tongue depressor that is often referred to at IU as a "doggy paddle."²⁷ He has authored many useful clinical publications and a noted textbook on clinical procedures.²⁸ In 1972, Eskridge became head of the Department of

Optometry at the University of Alabama Birmingham.

In the mid 1970s, the primary faculty member responsible for vision training was Merrill Allen. Mary Van Hoy, a member of the IU Optometry Class of 1971, remembers him as an inspiration for her specializing in vision therapy. Van Hoy recalls that Allen "always had time for his students" and that he was a very original thinker.²⁹ The Visual Training Clinic was relatively busy in the early 1970s. A student in the Class of 1974 was likely to complete six vision training cases.³⁰

In 1977, William (Bill) Somers joined the faculty, and he was assigned to the vision training clinic.³¹ Somers received his O.D. from The Ohio



William Somers (left) consulting on a case.

State University in 1971 and his Ph.D. in physiological optics in 1977. His Ph.D. work was under the guidance of Glenn Fry at Ohio State. His Ph.D. research was on spectral sensitivity curves and the absorption spectra of macular pigment and did not have anything to do with binocular vision. Because the philosophy of the faculty of the Ohio State Ph.D. program at the time was that their graduates should be capable of teaching any part of the optometry curriculum, he didn't have any difficulty in stepping right into teaching vision training.³² In the area of binocular vision and vision therapy, Somers was heavily influenced by the teachings of J. Boyd Eskridge at Ohio State. Among the changes Somers introduced to the visual training clinic was the incorporation of regular case conference meetings.³³

Somers developed some of the early computer programs for vision training.³⁴ The set of four training procedures was called "Eye Trix," a registered copyright name. One program trained base-in and base-out fusional vergence ranges. Color monitors capable of use with anaglyphic training techniques were not available at the time, so Somers used vertically separated targets which were fused when the patient wore vertical prisms. A pursuit eye movement training program had an image which moved across the screen and the patient counted how many times a gap appeared in a little square box. The speed of the target could be varied. A saccade training program required the patient to count the number of times a particular letter appeared as letters flashed back

and forth between the left and right sides of the screen. The speed and number of repetitions and the separation of the letters could be adjusted. Another program flashed numbers with variable numbers of digits for variable periods of time, and required the patient to observe and remember the number. Each program stored the patient's name and session results on a disk and retrieved them at the next training session. The programs were written in BASIC on an Apple II computer.³²

Merrill Allen retired in 1987 after teaching at IU for 34 years. He continued to keep regular hours in his office, and he increased his consulting work in motorists' vision. He also for many years continued to discuss issues relating to binocular vision and vision training with members of the faculty. When Allen retired, Somers officially took over the vision training clinic and became the classroom instructor in vision training. Somers provided classroom instruction in binocular vision to optometric technician students as well. He also published papers on aspects of accommodation testing.^{35,36} Somers was a mainstay in the Visual Training Clinic for 16 years, until his departure from IU in 1993 to pursue other opportunities.

A new faculty member in 1987 was Khashayar Tonekaboni, who had completed his optometric training at Southern College of Optometry. One of his interests was binocular vision, and he had participated in some seminars in vision therapy as a student. He was assigned full-time to the clinic, splitting his time between fourth year Primary Care, Contact Lens, and Vision Training Clinics. He served in the Vision Training Clinic for a little over a year, then shifted his emphasis to third year Primary Care Clinic, a role in which he continues at present and for which he has received clinic teaching awards from the students. In the late 1980s, the Vision Training Clinic usually operated five afternoons a week.

In January of 1988, Douglas G. Horner joined the faculty. Horner received his O.D. degree from Pacific University in 1974. Pacific University's curriculum and clinical requirements provided a very strong background in vision training. Horner and his classmates took courses in OEP analysis from Charles Margach; normative analysis from Harold Haynes; oculomotor function from Clifton Schor; physiological optics and binocular sensory aspects of vision from Niles Roth and Frank Thorn; visual training from Harold Haynes, Jane Brent



Douglas Horner

Carmichael, and others; and courses in experimental, developmental, and physiological psychology from Morton Gollender, Colin Pitblado, and Frank Thorn. A graduation requirement was seeing vision training patients for a minimum of 120 hours of in-office vision training. Following graduation, Horner practiced optometry for a few years in Oregon. He then entered graduate school at the University of Houston, where he worked on a variety of research projects, including studies of eye movements. Horner completed his M.S. in physiological optics in 1984 and his Ph.D. in 1987. He then spent a year in post doctoral study with Cliff Schor at the University of California Berkeley where they studied accommodation and vergence adaptation in patients with binocular vision disorders.³⁷ In 1988, Horner was assigned to the supervision of student interns in the Visual Training Clinic and other clinics at IU and started work on a number of research projects, including studies on corneal topography, contact lenses, and refractive errors.³⁷⁻⁴¹ He has had various didactic instruction responsibilities at IU, including teaching Ocular Motility.

New to the faculty in 1990 was William B. (Bill) Rainey, who had a B.S. degree in psychology from the University of Dayton and an O.D. from The Ohio State University. Among his instructors at Ohio State were well-known persons in pediatric optometry and binocular vision, such as Paulette Schmidt and Kent Daum. After graduation from optometry school in 1985, he was an Air Force optometry officer for five years. His clinical assignment starting at IU was as an instructor of third year interns in the Primary Care Clinic. His clinical skills and ability to communicate with children made him popular with the parents of



Bill Rainey

young patients. In the early 1990s, Rainey worked with Clinic Director Vic Malinovsky to establish a Pediatrics clinical service separate from the Primary Care Clinic. Patients 12 years of age and younger were to be seen in the Pediatrics Clinic and patients older than that would continue to be seen in the Primary Care Clinic. Patients requiring vision training were referred into the Vision Training Clinic from either Pediatrics or Primary Care. At about this time, the Visual Training Clinic generally began to be known as the Binocular Vision Clinic. In May of 1992, Rainey took over as Chief of the Binocular Vision Clinic and of the Pediatrics Clinic. A few months later, due largely to simplification of scheduling, the Binocular Vision and Pediatrics Clinics merged and

became known as the BV/Peds Service.

In June of 1992, David A. Goss joined the faculty. Goss had been in the same optometry class at Pacific University as Doug Horner. Following graduation from Pacific in 1974, Goss remained at Pacific for the remainder of the year doing graduate study in clinical optometry, taking courses in case analysis from Carol Pratt⁴² and visual skills in reading with Scott Pike and a strabismus readings course with William Ludlam. Goss worked in a group optometry practice in northwestern Iowa in 1975, and in 1976, he entered graduate school at IU. His thesis advisor was Henry Hofstetter, and he completed his Ph.D. in 1980. He was on the faculty of Northeastern (Oklahoma) State University College of Optometry from 1980 to 1992, where he taught courses in ocular motility, accommodation and vergence case analysis, visual optics, and various other topics in vision science and binocular vision and did research on refractive errors and binocular vision testing methods.⁴³⁻⁵⁰ His primary teaching assignment at IU in 1992 was supervision of student interns in the Binocular Vision Clinic. At IU, he has taught courses in theory and management of non-strabismic binocular vision and accommodative disorders, refractive development theory, and binocular vision clinical testing procedures.

In 1992, the administrative and faculty governance structure of the School was modified with the elimination of departments within the School.^{51,52} Ted Grosvenor noted that Dean Jack Bennett, in his proposal for the modification of faculty governance, had suggested that "the ability of faculty with similar interests and/or activities to loosely band together for mutual support or cooperative activity be encouraged."^{53,54} Grosvenor suggested that "interest groups" could be formed to achieve those purposes and the groups should be organized along lines of patient care topical areas with the activities of the groups encompassing teaching, research, and patient care activities. He proposed six interest groups, one of them being Binocular Vision/Pediatrics. This structure was not formally adopted. However, the faculty working in the Binocular Vision and Pediatrics Clinics took the idea to heart, and in 1993, Rainey, Horner, and Goss started meeting on a regular basis to discuss teaching syllabi, research ideas, and patient care protocols. The BV/Peds group has continued to meet on a regular basis to the present day.

An addition to the BV/Peds group in 1994 was Andrya Lowther. She earned bachelor's and master's degrees in education from The Ohio State



Andrya Lowther

University. She was a special education teacher for nine years, an instructor and educational consultant at Ferris State University College of Optometry for eleven years, and the clinical coordinator for adult learning disabilities in the University of Alabama Birmingham Program for Developmental Disabilities for four years. At Ferris State, she worked with Jack Richman, Ralph Garzia, and Mike Cron. She started working at IU part-time as an instructor and clinical consultant in visual information processing. She added an important dimension to the group in providing patient work-ups and didactic instruction in visual information processing.

Also becoming active with the BV/Peds group in 1994 was Tracy Schroeder (Swartz). She finished optometry school at IU in 1994 and enrolled in the physiological optics/vision science graduate program. While working on her M.S. degree, she was a consultant in IU's BV/Peds Clinics at both the Atwater Eye Care Center in Bloomington and the Indianapolis Eye Care Center (IECC). Schroeder served as Chief of Binocular Vision and Learning Services at IECC from 1995 to 1998. She completed her graduate degree in 1998 with Doug Horner as her advisor, after which she left IU to pursue practice opportunities. While at IU, Schroeder brought a high level of energy to her work and contributed to a number of published studies.^{40,55-58}

By the end of 1994, clinical activity in the BV/Peds Clinic had increased to the point that a full-time clerical clinic coordinator was added to the group. Joanne DeLone assumed that role starting in January, 1995. She had previously worked at the School of Optometry as a laboratory assistant in the research labs of Bob DeVoe and Carolyn Begley. In the BV/Peds Clinic, she scheduled and received patients, ordered and checked out equipment, managed patient records, maintained copies of examination forms, kept logs of patients seen, scheduled various screenings, and did whatever miscellaneous tasks needed to be done. Joanne retired at the end of February in 2004. She was greatly appreciated for not only her work habits but also her kindly demeanor and friendly disposition with all she met.

In 1994, the BV/Peds group outlined a development plan, and by the end of 1995, several of the goals had been realized. An educational consultant (Andrya Lowther) and a

clinic coordinator (Joanne DeLone) had been added to the group, equipment purchases had been made (e.g., Teller Preferential Looking cards, MTI Photoscreener system, upgrades of the Computer Orthoptics system), BV/Peds activity at the Indianapolis Eye Care Center had been expanded, examination forms had been updated, vision training kits for at-home use by patients had been developed, and there had been an increase in the time required of fourth year interns to be in BV/Peds Clinic from one half day per week to two half days per week.⁵⁹ There had also been an increase in the number of patient encounters "from an average of under 50 patients per month four years ago [1992], to almost one hundred per month eighteen months ago [1994-95], to approximately 120 to 130 per month at present [1996]."⁵⁹ The BV/Peds group had also recommended the addition of two courses to the optometry curriculum (V781, Pediatric Optometry, and V782, Vision Perception and Learning Disabilities), which were then subsequently taught by members of the group.

In 1995, the BV/Peds group embarked on a large research project which has since been referred to as the Benton-IU Project.⁶⁰ The project was initiated as a result of an inquiry from the Superintendent of the Benton Community School Corporation, Benton County, Indiana, Glenn Krueger, about the possible contributions of vision to the academic success of early elementary school students. The BV/Peds group partnered with the IU Department of Speech and Hearing to design a study protocol to investigate factors which influence early academic performance. In 1995-97, standardized eye, vision, auditory, perceptual, linguistic, intellectual, and cognitive tests were administered to 470 first grade children in the Benton County schools. There was a remarkable participation rate in that 96% of the children entering first grade in those years were tested. Children were bused to IU's Indianapolis Eye Care Center for some of the testing and other testing was conducted at the schools in Benton County. Each child underwent about eight hours of testing in total. Children who were found to have need for glasses or treatment for ear problems were referred for care. In 1998-2000, the same three classes of children were tested again in fourth grade. Hundreds of IU students and faculty participated in the testing of the children. Charles Watson of the IU Department of Speech and Hearing and Doug Horner served as principal investigators for the study. Andrya Lowther coordinated

numerous trips of faculty and students by van to Benton County to conduct testing. Tests categorized as visual cognition tests were found to be one of the predictors of school performance in the first grade.⁶⁰ Analysis of the results from the Benton-IU Project is continuing.

Discussions at the regular meetings of the faculty and staff of the BV/Peds Service cover not only clinical topics, but also didactic issues and research efforts. In 1998, the members of the BV/Peds group documented their various activities.⁶¹ In addition to regular patient encounters in the Atwater Eye Care Center and the Community Eye Care Center, 169 Head Start children were screened, 110 Well Child children were screened, 145 eye and vision examinations were done at the Indianapolis Eye Care Center for the Benton project, and 145 visual information processing work-ups were done for the Benton project. Members of the BV/Peds group taught seven didactic courses and contributed to the teaching of others. Members of the group published fourteen refereed papers, six book chapters, one book, and seven other items in 1998. Rainey and Schroeder also completed their M.S. degrees in 1998.

By mid 1997, the BV/Peds group recognized that the activities of the service might be enhanced and the vision training program could be expanded by the addition of a clinical rank faculty member, who might also offer specialty services that were not presently offered, such as infant vision care or care of patients with traumatic brain injury.⁶²

Although it was not possible at that time to add a clinical rank faculty member, the addition of another faculty member a few years later filled one of the needs identified by the group. An excellent solution to the need for infant vision services was found with the hiring of an infant vision researcher, T. Rowan Candy, in 2000. Candy completed optometry school at the University of Wales, Cardiff, in 1989. After practicing for two years, Candy studied at the University of California Berkeley, receiving her Ph.D. in vision science in 1997. From 1997 to 2000, she did post doctoral research at the Smith-Kettlewell Eye Research Institute in San Francisco. Candy has established a very active infant vision laboratory at IU. She is directing a number of studies relating to the development of accommodation, refraction, and visual function in infants. She has published some of her work in highly respected journals.⁶³⁻⁶⁵ In the BV/Peds Clinic, Candy examines infants and children under three years of age.

A graduate student in Rowan Candy's lab that has contributed significantly to the work of the

BV/Peds group is Grazyna Tondel. Tondel was trained as a physician in her native Poland and received her M.D. degree there. She practiced as a neonatologist in Poland. She became interested in optometry through her father, Boleslaw Kedzia, who is a biophysicist and practicing optometrist, and formerly founder and head of an optometry school. Tondel completed her M.S. degree in vision science in 2003. She has served as a teaching assistant in the V755 Basic Visual Therapy and V782 Visual Perception and Learning Disabilities courses for several years.

The BV/Peds group started a residency program in Binocular Vision and Pediatrics in 1999. Residents see patients in both Bloomington and Indianapolis, oversee student intern patient encounters in Bloomington, and complete a research project. The first resident was Don W. Lyon. Lyon entered optometry school at IU with a B.A.



Don Lyon

degree in psychology from IU. Lyon finished optometry school in 1999, and was the BV/Peds resident in 1999-2000. After completing the residency, Lyon accepted a joint appointment with the IU School of Optometry and IU School of Medicine Department of Ophthalmology. He was the Chief of BV/Peds Services at Indianapolis Eye Care Center for the School of Optometry. His work with the School of Medicine involved seeing patients in the Pediatric Section in the Department of Ophthalmology at the Riley Outpatient Center. The resident in 2000-01 was David Rich, a member of the IU School of Optometry Class of 2000. After completing his residency, Rich entered practice in Atlanta, Georgia. After a year without a resident, the BV/Peds resident in 2002-03 was Joseph De Spirito, a graduate of Southern College of Optometry. De Spirito then entered practice in Bloomington. In 2003-04, the BV/Peds resident was Christy (Carlisle) Hohenbarry, who graduated from IU in 2003. Hohenbarry is starting practice in Illinois. The resident for the current year is Danielle Warren, a graduate of Illinois College of Optometry.

A distinct loss to the BV/Peds Service in 2003 was the departure of Bill Rainey from the School. He had served as the Chief of the BV/Peds Service from 1992 to 2001, juggling the many advances the Service made during that period of time with a busy schedule of teaching and service. Rainey taught V755 Basic Visual Therapy and V781 Pediatric Optometry. Well known among educators in vision therapy and the clinical practice of pediatric optometry, Rainey did a significant

amount of work on the use of computers for education and communication in optometry.⁶⁶⁻⁶⁹ He continues to maintain an email communication service which he established - VTOD-L, a listserv for optometrists practicing vision therapy. Rainey had mentored the first few BV/Peds Residents, compiled a BV/Peds Clinic manual, was a significant participant in the Benton-IU Project, and had published a number of clinical studies on accommodation and convergence and other topics.^{55-58,70-73}

Doug Horner served as Chief of the BV/Peds Service from 2001 to 2004. Horner had the difficult task of working on details of scheduling of consultants in the BV/Peds Clinic in the absence of the services of Bill Rainey. Fortunately, Rich Meetz, a 1976 IU Optometry graduate and faculty member since then; Tracy Nguyen, a 1999 University of Houston graduate and an IU faculty member since 2000; and Nikole Himebaugh, an IU Optometry graduate and currently a vision science graduate student, have done an outstanding job in filling in openings in the schedule. New to the BV/Peds Service in 2004 is Laura Logan, who took over from Joanne DeLone as the BV/Peds clinic coordinator. In July of 2004, Don Lyon left his affiliation with the IU School of Medicine to become a full-time faculty member in the School of Optometry and Chief of the BV/Peds Service. Lyon has been coordinating IU's school vision screening program since his residency.⁷⁴ Lyon carefully oversees the BV/Peds residency program, and he has worked on a number of nationwide studies on amblyopia. Among Lyon's goals for the future of the BV/Peds Service are an increase of the number of patients seen and an expansion in vision therapy services. Lyon hopes to facilitate additional referrals from outside practitioners. Vision therapy services presently offered include training for accommodation and vergence disorders, such as convergence insufficiency and accommodative infacility; strabismus and amblyopia; learning related vision problems; and visual information processing problems.

Didactic Instruction in Vision Therapy

In the first years of the program, most of the didactic instruction in vision therapy occurred in V556 Clinical Optometry IV, a three lecture hour course. The catalog description of the course was "Analysis, measurement, acquisition, and improvement of visual skills; analysis, treatment, measurement, specification, and techniques used in handling concomitant squint; amblyopia exanopsia; instrumentation."⁷⁵ Effective with the

1967-68 school year, as the IU optometry curriculum expanded from three to four years, the course number for Clinical Optometry IV changed to V656.

In 1973, the course number and title changed to V554 Orthoptics, which was a three lecture hour course in the third year of the curriculum. The course description was "Diagnosis, prognosis, and orthoptic treatment of anomalies of binocular vision, including the optical, motor, sensory, integrative, and perceptual systems."⁷⁶ In 1976, Orthoptics became a four hour course, with three hours of lecture and one laboratory session per week.⁷⁷ In 1984, didactic instruction in vision therapy was expanded to three courses: V450 A Survey of Reading and Learning Disabilities, one credit hour; V554 Vision Therapy 1, 5 credit hours; and V559 Vision Therapy 2, two credit hours.⁷⁸ The catalog description of Vision Therapy I remained the same as it was for previous course entitled Orthoptics. In 1987 and 1988, the Vision Therapy 2 course was an elective, but it was again listed as a required course from 1989 to 1993.^{79,80} In 1989, the course on reading and learning disabilities was discontinued.

When the optometry curriculum was reorganized and courses renumbered in 1993, the course covering vision therapy became V755 Basic Visual Therapy, three credit hours. The course description for this course remained the same the previous Vision Therapy 1 course.⁸¹ The second course in vision therapy, V758 Advanced Visual Therapy, two credit hours, became an elective. In 1998, two courses were added to the required curriculum, carrying Basic Visual Therapy as a prerequisite: V781 Pediatric Optometry, 1.5 credit hours; and V782 Visual Perception and Learning Disabilities, 1.5 credit hours.⁸²

From 1956 to 1970, instructors in the Clinical Optometry IV course included Gordon Heath, Bill Baldwin, Ron Everson, Jack Pierce, and Tom Madden.⁸³ Throughout most of the 1970s and 1980s, didactic instruction in vision therapy was primarily the responsibility of Merrill Allen and Bill Somers. From 1993 to 2003, the Basic Visual Therapy course was taught by Bill Rainey; in the Spring Semester of 2004, it was taught by David Goss, Doug Horner, and Don Lyon. Andrya Lowther has taught the Visual Perception and Learning Disabilities course since it was added to the curriculum.

Comments

Vision therapy has been a part of the curriculum and part of the clinical experience of

students at IU since the beginning of the optometry program. This paper has attempted to show how the instruction and clinical services in vision therapy have changed over the years at IU and to document some of the contributions of the persons who have taught this important topic.

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The Ocular Disease Clinic at the IU School of Optometry *by Victor Malinovsky, O.D.*



Vic Malinovsky

The Ocular Disease Clinic became a separate specialty clinic in the School of Optometry in 1991. Clinical faculty members John Gelvin and Victor Malinovsky envisioned an ocular disease specialty clinic that would provide the highest level of optometric patient care and education. The Ocular Disease Clinic was first located at the Atwater Eye Care Center in the Optometry building on the IU Bloomington Campus. We then moved our Clinic in 1998 to the newly remodeled Community Eye Care Center on the west side of Bloomington (803 North Monroe Street).

Indiana University School of Optometry has purchased a number of pieces of state of the art diagnostic equipment for the Ocular Disease service. We perform the most sophisticated and most sensitive visual field testing for both glaucoma and neurological diseases, using the newest versions of the Humphrey Visual Field Analyzer II and Zeiss Meditec Frequency Doubler technology. We also have the capability with some of the new software to do short wavelength automated perimetry (SWAP), which is a blue target on a yellow background for enhanced detection of early visual field defects. The school has made a commitment to our clinic in regard to having the most sophisticated diagnostic testing for glaucoma and retinal / macular diseases with the acquisition of the Heidelberg Retinal Topography II (HRT) and the Optical Coherence Tomography (OCT) Zeiss Meditec.

In 1995, John Gelvin left our faculty and is now in private practice in Kansas City, Kansas. Replacing Gelvin proved to be a tough assignment but we were extremely fortunate to hire Jane Ann Grogg, an IU optometry graduate who was trained further at Bascom Palmer Eye Center in Miami, Florida. She brought a wealth of knowledge and skill, but more importantly, she embraced our philosophy of compassionate care.

Efficiency of our clinic operation would not be possible without the able services of Michelle Cornett, who coordinates all of our activities. Michelle is a graduate of IU's optometric technician program. She has been working in the Ocular Disease Clinic since 1997. The staff at the Community Eye Care Center is highly appreciated for their constant support of the clinic.

In 1999, we began to provide specialized retinal care for patients in need of laser and surgical treatment. Ron Danis and Tom Ciulla from the IU School of Medicine Department of Ophthalmology joined our service. This has been an invaluable addition to our teaching and patient care service. Both Ciulla and Danis left the Department of Ophthalmology in 2002. We were very fortunate to have Bob Yee, Chairman of the Department of Ophthalmology at the IU School of Medicine, continually support the retinal service in our clinic. Hua Gao (retinal subspecialist) was hired in 2003 by the IU Department of Ophthalmology and has continued excellent retinal service at the Community Eye Care Center. We are indebted to both the Department of Ophthalmology and Hua Gao for their continued patient care and support.

In 2002, we started an Ocular Disease residency in which an optometry graduate spends a year in our clinic. Our residents are also scheduled for rotations at the IU Student Health Center, IU Department of Ophthalmology, and the Eye Center of Southern Indiana. Evagelos Agapios, an IU graduate, was our first resident in 2002-2003. He is presently working at the Jackson Vision & Laser Centers in Carbondale, Illinois. Kim Kohne is our 2004-2005 resident. She is a recent graduate of the School of Optometry at the University of Missouri St. Louis.

Even though this is a teaching clinic, our philosophy since the beginning is that the vision care of the patients is our most important concern. The teaching component is certainly a high priority, but compassionate and personalized care is what will keep patients loyal to the clinic. We believe that this philosophy has worked because our patient numbers have grown over the years. The doctors and staff in our clinic take pride in being responsive to any questions or concerns. We believe that good communication has always been a key in providing the best care.

Victor Malinovsky is Clinical Professor of Optometry at IU and is the Chief of the Ocular Disease Service. He graduated from optometry school at IU in 1973, and has been a member of the IU faculty since 1987.

History of the Optometry Library at Indiana University

by David A. Goss, O.D., Ph.D. and Douglas K. Freeman, M.A., M.L.S.

After the bill establishing the Indiana University Division of Optometry was passed in 1951, the Indiana Optometric Association formed a Library Committee to collect books for the school's library. Noah Bixler (1884-1959) was made chairman of the committee. Bixler was a booklover, among many other interests, and helped design the library building in Decatur, Indiana, where he practiced optometry.¹ Bixler donated many of his own books to the school. The libraries of two deceased optometrists, Orris Booth and J.H. Hammon, were also donated to the school.² Others donating books before the first professional optometry classes even started were: William L. Berge, Donald Bixler, Irvin Borish, Mary Clay, Donald Conner, John Davey, H.L. Fuog, Mrs. Omar Fuqua, Gerald Johnson, Kenneth Justice, J.R. Markley, Glade McAfee, C.W. Morris, D Russell Reed, Edwin H. Robinson, and Jesse Scott.^{2,3} About 1,000 books were contributed, of which approximately 400 were non-duplicates.⁴ In December, 1951 the first book was purchased for the Optometry Library (Sugar HS. The Glaucomas. St. Louis: Mosby, 1951), and it bears an inscription by Bixler noting that fact.

In 1952, Henry Hofstetter was named Director of the Indiana University Division of Optometry. He spent the 1952-53 year drawing up a curriculum, hiring faculty, ordering equipment, and making other preparations for students to be entered in the Fall of 1953. During that time, he ordered approximately \$2,000 worth of books and journals for Optometry Library reference.⁵ When the first optometry students started their studies in 1953, the optometry school offices were in Myers Hall, optometry laboratories were conducted in the old Student Health Center Building, then located behind where Jordan Hall stands today, and optometry lectures were held in various buildings around campus. Optometry library holdings were in the main library, which from 1908 to 1969 was located in Franklin Hall. In the following years, faculty offices were moved several times, being located at various times in Jordan Hall, the old Student Health Building, Swain Hall East, and Wylie Hall.

From 1952 to 1964, approximately 1,200 books which were requested by optometry faculty were purchased. In the early 1960s, about 40 bound volumes of periodicals were added to the optometry holdings annually.⁶ In 1964, the total number of library items, including books, bound journals, reports, reprints, etc., for optometry was about

3,500.⁴ These were housed in Franklin Hall. The optometry faculty also informally maintained an unofficial collection of faculty owned books and journals in the optometry administrative offices for convenient reference.

In the mid 1960s, when planning began for the new optometry building, an integral part of the planning was the inclusion of an optometry library. However, prior to that time, the last branch library to be established on campus was started in 1940, and there was resistance in the administration to start another one. At that time, planning was also underway for the construction of a new library building at Tenth and Jordan. Optometry faculty members, who already had found the transit from their offices to another building for library materials to be inconvenient, were now faced with a potential three-quarters of a mile walk one-way from the site of the new optometry building at Atwater and Woodlawn to the new main library site. Hofstetter petitioned the Faculty Library Committee for the establishment of an optometry branch library. Among the arguments for the branch library were the distance from the new optometry building to the new library, criticisms from the American Optometric Association Council on Optometric Education that the school did not have a branch library, the fact that all other optometry schools had their own libraries, and ready access to library materials as a factor in faculty recruitment.⁴ The request for the branch library also discussed opinions from other fields and other universities concerning the value of branch libraries. The Faculty Library Committee was persuaded and recommended the formation an Optometry Library.

In July, 1967, Elizabeth Egan assumed the position of optometry librarian and started preparations for transfer of optometry materials from the main library to the optometry building. Egan was a graduate of Baker University in Kansas, and she completed a Master of Library Science degree from Indiana University in 1959. Construction of the optometry building was completed in December of 1967, and the Optometry Library opened its doors in February of 1968. Assisting Elizabeth Egan at that time was Mrs. Nash Mabry.

Henry Hofstetter was very pleased with the new Optometry Library. In discussing the advantages of the new building and having all of the optometry's classes, laboratories, offices, and

library materials under one roof, he noted that "The new library is the most striking example of the role that information resources can play in a program of study. Well over a hundred users enter the library everyday. It is my guess that library utilization by optometry students and staff has increased by a factor of at least 25! I know that it has in my own case alone."⁷ In 1969, he observed that, "Mrs. Elizabeth Egan and her staff are developing a library that, in my opinion, is already outstanding."⁸ Extensive utilization continued through the next decade, as attested by door counts of 33,228 in 1973 and 41,434 in 1977.⁹

The Optometry Library received a grant from the National Library of Medicine that helped purchase print materials over the years 1968 to 1972 to help build the base collection. Library furniture and shelving were purchased with monies from funds for the construction and furnishing of the new building. The library has had no major structural changes since its beginning, with 480 square feet for office and service area and 4,000 square feet for shelving and study areas. In 1978, there was 2,600 linear feet of shelving,⁹ to which were added several hundred linear feet in 1993. In 1996 the library was repainted, and carpeted.

The size of the collection has gradually increased over the years. Various reports indicated there were about 10,000 volumes in 1976, about 13,000 volumes in 1981, more than 14,700 volumes in 1985, about 16,000 in 1990, and about 19,500 in 1999. As of 2003 there were approximately 22,000 volumes in the collection. At least as late as 1978 no systematic weeding or withdrawal of outdated or unnecessary items was being done because there was more than sufficient space for new materials. By 1990 some periodic withdrawal of materials had begun,¹⁰ but weeding of the collection generally has had a low priority. The collection also includes more than 13,000 uncataloged items in vertical files including archival materials, equipment manuals, faculty reprints, American Optometric Association materials, etc.

The largest single donation of books to the Optometry Library was the 1992 donation of approximately 3,600 volumes by Dr. and Mrs. James P. Leeds of Carmel, Indiana. Jim Leeds, who died in 1995, practiced optometry for over 45 years and was a lifelong collector of books relating to optometry.^{11,12} His collection included a number of rare and unusual books. Dr. and Mrs. Leeds made their donation in memory of their son Kenneth S. Leeds, who graduated from the IU School of Optometry in 1979.

Library hours have gradually increased. The library was open 60 hours per week during the

academic year in 1978, 64 hours in 1985, 73 hours in 1991, and 74 hours in 1999. At present the library is open 80 hours per week during the regular semester and 45 hours per week during the summer and between semesters.

Over the past several decades libraries worldwide have had to cope with constant inflation in the cost of library journals. Over the past decade or so, journal inflation has been in the vicinity of 10% annually, even though general inflation in the United States has been closer to 2-3%. Institutional budgets simply have not been able to keep up with these increases. The Optometry Library has not escaped this trend, and, as in many other libraries, increases in the cost of journals have nearly swallowed the budget available for the purchase of books. As a result, during the 2003-2004 fiscal year the Optometry Library's monographs budget was only \$1500 - roughly enough to purchase 15 medical texts.

Fortunately, in the early 1990s the IU Libraries implemented an alternative acquisitions program for all of their science branch libraries that permits them to obtain much of the book output of a large number of trade publishers in relevant scientific areas. This program (called an approval plan) is paid for by the central library administration and has enabled the Optometry Library to obtain hundreds of monographs that it would not have been able to afford otherwise. This program single-handedly averted what would have been an unacceptable gap in Optometry Library holdings.

The number of journals and periodicals received by the Optometry Library increased until sometime in the early or middle 1980s but has decreased somewhat since then due to the skyrocketing cost of scientific journals. All Indiana University libraries on the Bloomington campus have been forced to undergo several serials cancellation projects since that time, most recently in 2004, with the Optometry Library canceling four serials this past year. Currently the Optometry Library holds 129 subscriptions, not counting serials received for free. Today, the cost of some single journal subscriptions for one year are in the thousands of dollars, some almost equaling the entire 1978 Optometry Library journal subscription budget of about \$5,000. The journal *Vision Research* alone, for example, lists its 2004 subscription price for institutions as \$3,250.

For many years an annual contribution by the Indiana Chapter of the American Academy of Optometry has helped to offset such high subscription prices. Without this support the Optometry Library's journal holdings would be significantly less than they are at present.

The loss of print journal subscriptions over the years should not be viewed as catastrophic. The world has changed since the Optometry Library opened its doors in 1968. Today, technology has enabled access to information that wasn't even dreamed of in those days. Using the IU Libraries online catalog, which was implemented in 1991, library users can scan the holdings of all of the IU libraries in the state as well as a number of other research libraries around the country. Literally thousands of journals are now available to Indiana University personnel online, and many of these journals are available across all IU campuses. This means that hundreds of journals purchased by the IU Medical Center in Indianapolis are available to faculty, staff, and students in Bloomington (and vice versa). This sharing of electronic resources has been a great boon to School of Optometry faculty and students and largely offsets decreases in local acquisitions budgets.

Another positive development has been the impact of technology on the Association of Vision Science Librarians. Member libraries, including the IU Optometry Library, now are able to share their individual resources electronically.¹³ A request for information from any member library can appear in all member libraries within seconds, and it is not uncommon for the desired information to be retrieved and sent to the requesting library within minutes. Users of the Optometry Library thus have ready access to the collections of dozens of other vision libraries throughout the world.

In 1978, the collection policy for the Optometry Library was to purchase all books in the areas of optometry, physiological optics, visual perception, neurology of the visual pathways, color vision, ocular pharmacology, visual standards for various occupations, and optics with application to optometric theory and practice. Selective purchasing was done for books in the areas of ophthalmology, neurology, optics, blindness, reading disabilities, public health, illumination, and general pharmacology.⁹ In general, this policy continues to this day, although it is constrained somewhat by the size of the book budget. As a result--and with the addition of the Leeds collection--the present holdings are particularly strong in general optometry; anatomy, physiology, neurology, and pathology of the visual system; general optics; visual and color perception; alternative and controversial approaches to vision care; and the history of optometry.¹⁴

The optometry school has had the good fortune to have had some dedicated and skilled persons serving the Optometry Library in its three-plus decades of existence. Elizabeth Egan was the first

Head of the library and served from 1967 to 1980. Her work was respected and appreciated by optometry faculty and students and by her librarian colleagues on campus. She was president of the Association of Visual Science Librarians in 1973,¹⁵ and was one of that important organization's founders. Other librarians who served as Optometry Librarian include: Stella Bentley (Fall, 1980), Sabina Sinclair (1981-1982), Roger Beckman (1983-1986; on leave 1985-1986), Romona Fox (Acting Librarian, 1985-1986), Miriam Bonham (1986-1989), Steve Sowell (Acting Librarian, Spring, 1990), and Douglas Freeman (1990 to the present). Beckman, who served as Head of the Optometry Library from 1983 to 1986, is currently Head of the Chemistry and Life Sciences Libraries on IU's Bloomington campus.

Freeman is the current Head of the Optometry Library and has held this position since 1990, when he was appointed Head of both the Optometry Library and Medical Sciences Library. The School of Optometry was able to retain his services full-time in 1994 when he was appointed both the Head of the Optometry Library and Director of Technology for the School of Optometry, relinquishing the headship of the Medical Sciences Library. He continues in both of those capacities at present. He has held a number of positions in professional organizations, including Chair of the Vision Science Librarians Special Interest Group of the Medical Library Association (1996-97), Chair of the Vision Science Librarians Special Interest Group of the Association of Schools and Colleges of Optometry (1997), and Co-Chair of the Informatics Special Interest Group of the Association of Schools and Colleges of Optometry (2001-2002). He has served the Association of Visual [now "Vision"] Science Librarians as Secretary (1994-95), Chair (1996-97), and Archivist (1998 to the present). He is also editor of Guidelines for Vision Science Libraries, an annual publication of the Association of Vision Science Librarians.¹⁶ Freeman holds an undergraduate degree from Purdue University, an M.A. (1972) in Slavic Languages and Literature from IU, and a Master of Library Science (1974) from IU.

Freeman believes that his dual role as Head of the Optometry Library and Director of Technology (in which he is responsible for the school's electronic infrastructure) is a model for the future of librarianship. The two sets of responsibilities are closely intertwined, since both essentially are dedicated to the acquisition, storage, and dissemination of information. Incorporating these two functions within the responsibilities of one individual allows the Library to be fully integrated

into the School's electronic environment.

The position of Head of the Optometry Library is a faculty appointment, and Freeman has been active in School faculty activities, serving as the school's Faculty Presider during the 2001-2002 and 2002-2003 academic years, Chair of the School's 50th Anniversary Committee, Member of the Dean's Review Committee, and a number of other committees and task forces.

The Optometry Library has only one other staff position-that of Branch Coordinator. Lois Selk, who held this position for almost 25 years, was hired and trained by Elizabeth Egan in 1970. Douglas Freeman had the following to say about Lois when she retired in 1994: "Lois is the principal reason that the Optometry Library is in such good condition today. The consistency brought about by her long service here has precluded the false starts and constant training that are customary when there is frequent staff turnover. The characteristics that she demonstrated at work include: dedication, loyalty, intelligence, unrelenting hard work, and especially the ability to stay unruffled under pressure. Thousands of optometry students and hundreds of optometry faculty over the years owe much to Lois' service. As testimony to the esteem in which she is held by the School of Optometry she was the winner of the Foley House Basement Door Key for 1994. The award is made to persons deserving special recognition for their roles in the school's development and is usually made to a prominent faculty member or administrator. Lois is the only non-optometrist to win the award in its twenty-year history."¹⁷ Following Ms. Selk in the position of Branch Coordinator were two other outstanding employees: Anne Foster (now a hospital librarian in Petoskey, Michigan) and Cris Coffey, who currently holds the position.

The purposes of the Optometry Library have remained unchanged over the years. The primary purpose is to support the instructional and research functions of the School of Optometry. It also provides optometry and vision science resource materials to the Indiana professional and lay public.

What is the status of the Optometry Library as of 2004? In many ways it is stronger than it ever has been. Despite diminishing budgets, new technologies have allowed improvements in service. These technologies have also permitted increased efficiencies. With the electronic tools that are currently available the librarian can serve greater numbers of people-and do so more effectively-than in past decades. For example, using modern technologies the librarian can scan thousands of journals in support of faculty, student, or practitioner information needs, frequently in just a few minutes. Technology enables today's faculty, students, and

practitioners to be better informed about the scientific literature than their predecessors.

Another characteristic of the Optometry Library in 2004 is that it has become less of a place than a service. Availability of the library's resources no longer ends at the library door. It is not necessary to visit the library in order to use its resources or to receive assistance from a librarian. Students and faculty can tap into its resources or communicate with the librarian while at home, in class, in the student lounge, in the School's computer cluster, while sitting on the front steps of the building, or indeed anyplace on the globe where there is access to the Web.

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History of the Fellowship of Christian Optometrists

by Susan Kovacich, O.D., and Clifford W. Brooks, O.D.

In 1971, Bill Billman (IU OD Class of 1974) was in his second year at Indiana University School of Optometry. He and five classmates discussed the idea of starting a Bible study, which he offered to lead. The students named their fledgling group Fellowship of Christian Optometrists or FCO, after an established college student group for athletes (Fellowship of Christian Athletes or FCA). The purpose of the group was to meet for fun, fellowship and Bible study. Bill recalls that "the Dean of the optometry school at the time, Gordon Heath, was very encouraging of this new group and graciously offered the use of the Faculty Lounge." The group met before class for donuts, singing, prayer and Bible study. The leadership for the group came out of the following classes and the group continued after the original members graduated.

Cliff Brooks, who had graduated from optometry school at IU in 1971, returned to IU as a faculty member in 1974 and began attending FCO meetings, thus becoming the faculty advisor. FCO met in various locations, including the optometry school or Cliff's residence on Atwater Avenue near the school. Often the students continued to meet at 7:30 am for breakfast and Bible study before class started, or they would meet at noon in the faculty lounge. It was even possible in the 1970's for the group to meet late in the afternoon.

During the mid 1980's several medical doctors from the Emergency Department of the Bloomington Hospital were guest speakers at FCO meetings, talking about medical missions. It became apparent to Cliff that "at that time, while there were many optometry students who were interested in missionary work, there were few existing opportunities for optometrists and no national organization to support this work." Medical doctors, however, had the well-established Christian Medical and Dental Society (CMDs) and a long history of medical missions work. Optometry needed a support network to overcome difficulties of obtaining and transporting expensive examination equipment and the large quantities of optical and pharmaceutical supplies needed to equip an eye clinic. In 1986, Cliff and students Dawn Gutwein (IU OD '88), John Gelvin (IU OD '89), Karen Brown (IU OD '89) and Darla Heck (IU OD '90) to name only a few, began to discuss the creation of such a network. That same year, Cliff, John, Karen, Dan Gerstman (IU OD '69), Bill

Brown (Illinois College of Optometry OD '73), Joe Segree (University of Alabama Birmingham OD '77) and Glen Linsley (Ohio State University OD '76) met in Bloomington to move the idea along. Articles of Incorporation and Bylaws were drawn up and a Board of Directors formed for what would soon become FCO International, Inc.

The goals for creating this organization were to support optometric mission work and form a network between optometrists/optometry students and the rest of the ophthalmic community, while not forgetting the value of the spiritual impact in the lives of the optometry students and patients in the mission clinics. Although several schools had existing individual Bible study groups, the formation of FCO International enabled all American optometry schools to become involved. Ohio State was the first school outside of IU to form an FCO chapter, in 1987. Other schools followed, at a rate of about one a year, until all the schools had an FCO chapter by the late nineties. FCO International gave the schools better communication within this new network, and energy could be expended more efficiently instead of each school's group trying to exist on its own.

Shortly after the creation of FCO International, a student, Lyn Graves (IU OD '89), suggested that the IU FCO chapter go on a short term eye care mission trip to Haiti. Lyn had helped in the initial construction of a mission compound outside the capital of Port au Prince. At the completion of the eye care mission trip, IU FCO was asked to consider starting a full-time eye clinic. Students immediately began working toward this end. The clinic is still in existence as ChristianVision Eye Services to Haiti and is under the stateside supervision of John Gelvin (IU OD '89). Shelly Kaluf (IU OD '02), is currently the optometrist at the ChristianVision clinic.

In the early 90's a coup attempt in Haiti prevented students from going on eye care trip to Haiti. Instead students began going to a mission in Honduras. Repeating the process again, a new, full-time eye clinic was established in Tegucigalpa, Honduras, where Valerie Colby (IU OD '99) and her husband Trevor are now working full time.

FCO International provides opportunities for those who want to help others both physically and spiritually. Kelly Frantz (Pennsylvania College of Optometry OD '85) writes; "I have long had the desire to serve poor people and show them the

love of Christ. FCO has given me opportunities to do this by making mission trips to the ChristianVision Eye Clinic in Haiti, by helping support full-time missionaries there, and by helping groups of optometry students make short-term mission trips. In my role as faculty advisor to the student FCO chapter at the Illinois College of Optometry, I get to mentor students who can also carry out optometric mission work during their careers. It is a privilege to see how God can use the various members of His body to serve needy people." Angie Archer (IU Class of '05) was impressed by the commitment of former students to FCO and mission opportunities. She says that "Recently, I went on an optometry/medical mission trip to Honduras. The overwhelming support that I received from FCO alumni was a testimony to the Lord's faithfulness, as well as to the dedication and deep roots that have been established throughout the years in our FCO chapter."

Optometric mission trips give students the chance to use their optometric skills early in their education. Kyle Cheatham (IU Class of '05) relates an encounter from a mission trip to the Dominican Republic: "There was one experience with an older woman that I will never forget. Through an interpreter I learned that her distance vision was 'fine' but that up close she was miserable. She was a 7D hyperope and was struggling in the distance. But what she really wanted was to see her children's faces and read her Bible again." Kyle looked through the box of donated glasses and found a pair of bifocals close to the woman's prescription, and he recalled that, "when she put them on, she screamed 'Muy claro, muy claro!' (Very clear, very clear!)"

One fulltime missionary partially supported by FCO is Nancy Herbster (IU OD '80). Nancy has set up three clinics in the Republic of Congo. Her main clinic is in the city of Goma. According to the FCO website (<http://missionsalive.org/fcoint/>), "In the volatile region where Nancy works, there have been wars, refugees, volcanoes, ethnic fighting, and several changes of government. But the Lord's work continues through the optometric service of Optigo and Nancy's remarkable perseverance." The website also lists mission opportunities for optometrists in several countries including the Ukraine, Nicaragua, Trinidad, Nigeria, Honduras, China, Kenya, Jamaica, Zanzibar and the Amazon. With this worldwide exposure, FCO is beginning to attract members from other countries.

FCO International also has an annual conference that features a combination of optometric continuing education and inspirational

presentations for optometrists, optometry students, and their families. The first conference was in November 1987 at McCormick's Creek State Park, Spencer, Indiana. Two years later, the group outgrew this site and moved to nearby Brown County State Park where it remained until 2002 when it moved to Pensacola Beach, Florida.

Today, the students at IU meet for FCO in the evenings for fun, fellowship, prayer and Bible study. Through the group, many find that their selection of optometry as a career takes on a new meaning. As Steve Miller (IU Class of '05) puts it, "FCO has given me the opportunity to use what I have been learning in optometry school in a way that allows me to grow spiritually. I see my involvement with FCO as an integral part of my optometry education. It causes me to keep my priorities in order and my goals spiritually sound. For instance, I've had the opportunity to go on eye-care related mission trips to Honduras and the Dominican Republic, and both trips have taught me volumes both spiritually and in optometric experience. I've come to see optometry as my calling from God, as a special gift, and not simply as an arbitrary career choice."

Since the IU FCO group has always met weekly, students develop strong ties as they support each other through good times and bad. Many students have found their future spouses in this organization. Many students will remember the relationships that come out of this student activity for a lifetime. Kate Hummer (IU Class of '05) says it best: "Throughout my experience of optometry school, FCO has provided me with a wonderful support system. It has been an amazing experience to spend time every week with a group of students who are all seeking after God and sharing their faith together. Friendships are made, become stronger, and provide a powerful tool for us to encourage each other through fellowship and prayer. My personal journey of faith has been strengthened and challenged each week as various speakers have shared scripture and conversation. FCO is a wonderful way to take a step back each week from classes and the rigors of school to focus on what is truly important in our lives, to learn more and grow individually, and to share a wonderful bond of fellowship with classmates who, through this amazing group, will become life long friends."

Susan Kovacich graduated from the IU School of Optometry in 1987 and joined the faculty in 1998. Cliff Brooks completed his optometry degree from IU in 1971 and has been on the faculty since 1974.

Survey of Alumni Concerning Student Life at the Indiana University School of Optometry

by Greg Hubertus, B.S., and David A. Goss, O.D., Ph.D.

Much of the culture and experience of students goes unrecorded. Greg Hubertus, of the IU Optometry Class of 2005, surveyed a number of IU School of Optometry alumni to help preserve their recollections of student life. Interviews were conducted of one member of the Class of 1971, one member of the Class of 1977, three from the Class of 1981, one from the Class of 1984, two who were in the Class of 1993, one member of the Class of 1996, three from the Class of 1997, and one each from the Classes of 1999, 2001, and 2004. Surveys were done in person, by telephone, or by e-mail.

When alumni were asked what they remembered most about attending class in optometry school at IU, the overwhelmingly most common answer was the hard wooden chairs in room 105. Some alumni recalled that members of their class sat in the same chairs all through school.

When asked about particularly memorable professors, alumni expressed admiration and respect for many different faculty members. There were two professors who were mentioned most frequently. Paul Pietsch was described as being "intimidating", but "a wonderful person and teacher" and a "great lecturer".



Paul Pietsch



Ron Everson

Admiration was also expressed for Pietsch for defending the students' point of view. His histology quizzes in which students placed pointers on particular structures were challenging. Ron Everson was complimented for presenting material "clearly, logically, and concisely." Alumni also remembered that Everson memorized all students' names.

One class, acting on the notion that Everson remembered student names by associating them

with a particular seat, all intentionally sat in different seats one day and were able to get a laugh from Everson. Another alumnus recalled that on Halloween, some of his classmates put a skeleton from the anatomy lab in one of the seats in the back row. They were unable to get a reaction from Everson as he presented the lecture in his usual polished fashion.

When asked about extracurricular activities, some alumni noted that studies, work, and/or commuting took up most of their time. The most common activities mentioned were informal and intramural sports. Many of the alumni surveyed regularly attended IU basketball games and some attended football games too. Some went to concerts on campus and IU Auditorium events. One respondent rode in the Little 500 bicycle race as an IU undergraduate and one was a football manager during his first year of optometry school. Several of those surveyed participated in organizations such as IU Optometric Student Association, American Optometric Student Association, and Fellowship of Christian Optometrists. Some were involved in Volunteer Optometric Service to Humanity (VOSH).

Alumni were also asked if there were particular restaurants or night spots in Bloomington that they frequented. A member of the Class of 1971 recalled going to the Regulator, Nick's, the Stardust, Grove's restaurant, the Fireside, and the Gables. The constant across eras was Nick's, as alumni from the 1970's, 1980's, 1990's, and the first part of this century recalled going there. Alumni from the 1980's also remembered Mother Bear's Pizza, and the Hour House across the street from the school where Subway is now (before it was called the Hour House, it was known as Our Place restaurant). Alumni from the 1990's and 2000's recalled going to Jake's, the Bluebird, Peanut Barrel, Kilroy's, Trojan Horse, Crazy Horse, Irish Lion, J. Arthur's, Pizza Express, Second Story, Upstairs Pub, Lennie's, and Upland Brewing Company.

Optometry School Application Process and Student Tracking, 1978 - 2003 *by Jacqueline S. Olson, M.A.*

Twenty-five years has brought a number of changes in the equipment and methods used by the School of Optometry's Office of Admissions and Records, now called the Office of Student Administration. In 1978 we used typewriters (IBM Selectric - remember those?), postage meters, stencil machines - and rotary phones. There were no computers, no printers, no e-mail, no word processing, no databases, no web, although these were things that we were starting to hear about.

Here are some interesting comparisons of how the records for applicants to the Doctor of Optometry degree and for the enrolled students were handled in 1978 and in 2003:

Student Contact:

1978: primarily by letter; some phone calls, some walk-in Bloomington students

2003: primarily by e-mail, with phone a close second; walk-ins from everywhere

How They Learned About Optometry and Us:

1978: primarily by printed material, often provided by their optometrist or college advisors

2003: primarily by searching the web; optometrists provide information about the career

How They Applied:

1978: with a paper application obtained through the mail

2003: online through the IU ApplyYourself web portal; download and print the application from the School's website, or with a paper application obtained through the mail

How They Were Tracked:

1978: each applicant's information was entered on a 3 x 5 card

2003: each applicant's information is entered in a spreadsheet

How They Were Interviewed:

1978: optometrists did off-campus interviews for students, usually within 50 miles of the student's location, and sent in the reports by mail

2003: applicants visit the campus and are interviewed by faculty members

How They Were Ranked for Admission Purposes:

1978: academic information was entered on each

card; the cards were then manually placed in rank order. Lists were typed and re-typed frequently.

2003: a spreadsheet is sorted by relevant academic information

How They Enrolled for Classes:

1978: each student was given a cardboard enrollment ticket; the student proceeded to the field house to pick up IBM punch cards for each class and section and for a variety of other purposes, and turned the cards in upon leaving.

2003: students select a schedule, and the School of Optometry Registrar registers each one online.

Charting Academic Progress and Calculating Class Rank:

1978: semester GPA was directly observed from grade reports; cumulative GPA was calculated, and class rank lists were typed

2003: semester GPA is directly observed from grade reports. Grades are entered into a spreadsheet and cumulative GPA is calculated in the spreadsheet. Class rank is derived from the spreadsheet.

Alumni Information Files:

1978: paper files were kept on shelves and in filing cabinets

2003: paper files are converted to microfiche after three years; a great deal of alumni information is available online through IU's Student Information System. The School of Optometry also maintains its own alumni database.

Provision of Alumni Services For Licensing:

1978: by individual letter or form, upon request

2003: by individual letter or form, upon request

Changes in technology over the years have made it much easier to provide information and services to our applicants, enrolled students, and to the rest of the School of Optometry community. More information can be collected, and it is much easier to rearrange it to suit different needs. (Anyone miss the smell of stencil correction fluid? I don't!)

I started working for the School of Optometry in August of 1978. At that time the office was known as Admissions and Records and was located in OP 306. In the early 80's we moved from room 306 to room 308 in the Optometry Building. In the mid-80's the office moved again, to room 310, and

shortly after that the operation expanded across the hall into room 311. By this time the office was known as the Office of Student Affairs. Then in 2000-2001 the "Admissions and Records Office" became the "Office of Student Administration."

The technology we use and the names the office has been known by have changed over the years, but the goal of the office is the same as it was in 1978: to provide prompt and accurate service.



Jacqueline S. Olson is Associate Director of Student Services in the Office of Student Administration.

List of Graduates of the Physiological Optics/ Vision Science Graduate Program (1956-2003)

M.S. Degrees Awarded:

William R. Baldwin, 1956
Lester Ray Loper, 1956
Paul W. Lappin, 1956
Albert V. Alder, 1957
Floyd M. Morris, 1958
Robert B. Mandell, 1958
Tully Patrowicz, 1958
John H. Carter, Jr., 1959
Donald G. Pitts, 1959
Ronald W. Everson, 1959
John R. Levene, 1961
William M. Lyle, 1962
Edward R. Seefelt, 1962
Marvin Lunskey, 1962
Benjamin Kislin, 1962
Indra Mohindra, 1962
James E. Hamilton, 1964
Brian Ward, 1964
Walter W. Chase, 1964
Robert W. Ebbers, 1965
Michel A. Millodot, 1965
Martin Gellman, 1965
Constantine A. Ricciardi, 1965
John K. Crosley, 1966
Hock Min Leow, 1966
Marvin A. Langer, 1966
James A. Boucher, 1966
George R. Courtney, 1966
Arnulf Remole, 1967
Subhash N. Jani, 1967
Katty T. Lim Chiong, 1967
Joel B. Spiegler, 1967
Frederick Van Nus, 1967
Vigo H. Nielsen, 1968
Morton K. Ohlbaum, 1968
Ralph Swartz, 1968
Bertram D. Targrove, 1968
George C.S. Woo, 1968
Richard D. Septon, 1968
Roger C. Fitch, 1969
Richard D. Hazlett, 1969
Irving L. Dunskey, 1969
Wayne F. Provines, 1969
Lolita Baluyut Ty, 1969
Jacob G. Sivak, 1969
T. David Williams, 1969
Steven B. Greenspan, 1970
Louis V. Genco, 1970
Edwina C. Kintner, 1970
Charles J. Archibald, 1971
Ronald P. Austen, 1971
Rosa I. Revuelta, 1971
George W. Mikesell, Jr., 1971
Daniel R. Gerstman, 1971
Ian L. Bailey, 1971
James T. Gallagher, 1972
John F. Amos, 1972
David D. Glick, 1973
Charles L. Haine, 1975
Kenneth E. Brookman, 1975
Eugene J. Potvoricky, 1975
Stanley D. Miller, 1975
Raymond A. Applegate, 1976
Donald T. Lowman, 1976
Mark M. Uslan, 1977
Theanchai Tanlamai, 1978
Stella T. Briggs, 1979
Philip C. De Santis, 1979
Edwin C. Marshall, 1979
Robert E. Miller, II, 1982
Carol A. Westall, 1982
David J. Walsh, 1985
Richard J. Dennis, 1986
Frank E. Cheney, 1989
Harun Abdul-Rahman, 1991
Michel E. Hanen-Smith, 1993

Liang Cai, 1994
Motoshi Kato, 1994
Hui-Nan Zhang, 1995
Tracy L. Schroeder, 1998
Kevin K. Liedel, 1998
Bill B. Rainey, 1998
Colleen H. Riley, 1998
John R. Buch, 1998
Ronald Tutt, 1999
Grazyna Tondel, 2001
Michael Venable, 2002

Ph.D. Degrees Awarded:

Robert B. Mandell, 1962
John H. Carter, Jr., 1962
Donald G. Pitts, 1964
William R. Baldwin, 1964
William M. Lyle, 1965
Brian Ward, 1966
Rogers W. Reading, 1968
Arnulf Remole, 1969
Merrill E. Woodruff, 1969
Anthony J. Adams, 1970
Paul W. Lappin, 1970
George C.S. Woo, 1970
Ben Victor Graham, 1972
Richard C. Van Sluyters, 1972
Norman E. Wallis, 1972
Roger W. Wiley, 1973
Morton K. Ohlbaum, 1973
Perry Speros, 1973
Joel B. Spiegler, 1973
James E. Bailey, 1973
Joseph R. Zahn, 1975
Richard D. Hazlett, 1975
Thomas D. Williams, 1975
Robert W. Massof, 1975
Freddy W.L. Chang, 1976
Jerald W. Strickland, 1976
David B. Henson, 1976

George R. Courtney, 1977
Peter Avery Davison, 1978
Gary L. Trick, 1978
Kenneth E. Brookman, 1980
David A. Goss, 1980
James A. Worthey, 1981
Theanchai Tanlamai, 1981
Richard L. Martin, Jr., 1983
Thomas R. Colladay, 1983
Isaac K.O.K. Kragha, 1985
Jeffery K. Hovis, 1986
E. Peter Osuobeni, 1986
Michael K. Smolek, 1986
Mark A. Criswell, 1987
John P. Moxley, 1987
Daphne L. McCulloch, 1988
Douglas K. Penisten, 1988
David Lee Still, 1989
Risto J.K. Paallysaho, 1990
XiaoXiao Zhang, 1990
Ming Ye, 1993
Roger S. Anderson, 1994
Sassan Azarian, 1994
Michael O. Wilkinson, 1994
Maurice C. Rynders, 1995
Jennifer L. Hicks, 1995
Mark Alan Hallett, 1995
Yi-Zhong Wang, 1996
Fansheng Kong, 1998
David W. Evans, 1999
Thomas O. Salmon, 1999
Jie Zhou, 2000
Salih Al-Olikly, 2000
Xin Hong, 2001
Xu Cheng, 2003

List of Full-time Faculty Members

This list of the full-time faculty of the optometry program at IU is intended to include everyone from the beginning of the program to 2004. This list has been compiled from Bulletins of the IU Division of Optometry; from various reports, documents, and files in the School of Optometry; and from files from the Dean of Faculties office. This list also contains years of service as a full-time faculty member as best as can be determined. Where years of service differed in the various files which were consulted, attempts were made to reconcile the differences. Many of these faculty members taught on a part-time basis before or after their years of service as full-time faculty. Attempts were made to include all full-time faculty in the history of the school, but due to the varying natures of the available records, it is possible that there may have been inadvertent omissions, particularly where it was unclear whether a given appointment was part-time or full-time.

- | | | |
|------------------------------------|---------------------------------------------------|-------------------------------------------------|
| Gregory S. Abel, 1995-96 | Joseph A. Halabis, 1983-85 | John R. Pierce, 1964-70 |
| Anthony J. Adams, 1967-68 | Heidi E. Hamm, 1983-84 | Paul A. Pietsch, 1970-94 |
| Arthur J. Afanador, 1972-82 | Tiffenie Harris, 2004- | J. Stanley Rafalko, 1953-76** |
| Merrill J. Allen, 1953-87 | Gordon G. Heath, 1955-91 | Bill B. Rainey, 1990-2003 |
| Neal J. Bailey, 1954-58 | Sally Hegeman, 1987-2000 (90% FIE) | James A. Rakes, 1975-76 |
| William R. Baldwin, 1959-63 | Patricia A. Henderson, 1986-92,
1993-96, 1998- | Rogers W. Reading, 1964-95 |
| Carolyn G. Begley, 1984- | John R. Hitchcock, 1973-90 | Rosa Revuelta, 1971-76 |
| Edward S. Bennett, 1979-82 | Steven A. Hitzeman, 1976- | Colleen Riley, 1999-2004 |
| Jack W. Bennett, 1970-75, 1988-98 | Daryl W. Hodges, 1977-78 | Hurbert D. Riley, 1971- |
| William F. Billman, 1980-81 | Henry W. Hofstetter, 1952-79 | John Ross, 1987-96 |
| Paul P. Bither, 1981-88 | Douglas G. Horner, 1988- | Ingeborg Schmidt, 1954-70 |
| Joseph Bonanno, 1998- | C. Denise Howard, 1988-89 | W. Corydon Shafer, 1974-76 |
| Irvin M. Borish, 1973-83 | James E. Hunter, 1976-84 | John D. Shackle, 1972-73 |
| Arthur Bradley, 1985- | Gloria C. Jennings, 1981-82 | Charles R. Shick, 1958-93 |
| Clifford W. Brooks, 1974- | Arthur E. Jones, 1969-83 | Martin U. Skulskie, 1981 |
| Harry H. Brown, 1978-80 | Patricia M. Keech, 1977-79 | William W. Somers, 1977-93 |
| John R. Buch, 1997-98 | Marjorie J. Knotts, 1986-89 | P. Sarita Soni, 1976- |
| T. Rowan Candy, 2000- | Susan Kovacich, 1998- | Sangly P. Srinivas, 2000- |
| Diana Liu Carriger, 1975-77 | Janice F. LeDrew, 1972-74 | Jerald W. Strickland, 1967-74 |
| William A. Carrigier, Jr., 1973-77 | Theodore Rex Legler II, 1995-98 | Bradley M. Sutton, 1999- |
| Robert L. Carter, 1973-75 | John R. Levene, 1967-75 | Larry N. Thibos, 1983- |
| Patrick D. Cashin, 1973-74 | Gerald E. Lowther, 1994- | Alan Tomlinson, 1980-83 |
| Linda C. Casser-Locke, 1984-97 | Lynette S. Lui, 1979-80 | Khashayar Tonekaboni, 1987- |
| Freddy W.L. Chang, 1977-87 | William M. Lyle, 1962-65 | Robert C. Van Hoven, 1977-78 |
| George M. Chioran, 1983-85 | Don W. Lyon, 2000- | Dean Van Nasdale, 2004- |
| Susana T. Chung, 1997-2002 | Kirk A. MacKay, 1982-87 | Suresh Viswanathan, 2000- |
| Shaban Demirel, 1997-2001 | Thomas M. Madden, 1963-77 | Lilien A. Vogl, 1993-96 |
| Robert D. DeVoe, 1983-99 | Victor E. Malinovsky, 1987- | Gary B. Walters, 1976-81 |
| John P. Downey, 1996- | Daryl F. Mann, 1981-83 | David S. Williams, 1986-95 |
| Jess Boyd Eskridge, 1971-72 | Edwin C. Marshall, 1971- | T. David Williams, 1970-71 |
| Ronald W. Everson, 1961-64, 68-96 | Debra McConnaha, 1988-98 | M. Emerson Woodruff, 1965-67 |
| Cynthia A. Foster, 1999- | Richard E. Meetz, 1976- | Dennis M. Yamamoto, 1976-79 |
| Bruce I. Gaynes, 1985-88 | Mark R. Meuler, 1983-85 | Dwayne D. Young, 1981-84 |
| John B. Gelvin, 1990-95 | Dennis R. Miller, 1990-92 | |
| Daniel R. Gerstman, 1971- | Donald T. Miller, 1998- | <i>* split appointment with Psychology</i> |
| David A. Goss, 1992- | Hiroharu Noda, 1981-91 | |
| Marc A. Green, 1983-84 | Tracy Nguyen, 2000- | <i>** officially an anatomy professor 1953-</i> |
| Jane Ann Grogg, 1996- | Neil A. Pence, 1982- | <i>1971 and then split appointment in</i> |
| Theodore P. Grosvenor, 1974-77 | Merle K. Pickel, 1972-76 | <i>Anatomy and Optometry, 1971-1976</i> |
| Sherman Lee Guth, 1980-97* | Sandra L. Pickel, 1976- | |
| Gary S. Hafner, 1976- | Melanie Pickett, 2004- | |
| Charles L. Haime, 1974-78 | | |

Number of Graduates in each Class

The following table gives the number of optometry graduates in each class, including gender and ethnic minority distributions. Ethnicity is mostly based on self reports of the graduates. (Data provided by the IU School of Optometry Office of Student Administration).

Year	Total graduates	Male graduates	Female graduates	American Indians	Asians; Asian American	Blacks; African American	Hispanic	Other Minorities
1956	16	16	0					
1957	13	13	0					
1958	21	21	0					
1959	13	13	0					
1960	21	21	0			2		
1961	19	19	0					
1962	12	11	1					
1963	20	20	0					
1964	19	18	1					
1965	25	23	2					
1966	25	25	0					
1967	33	32	1		1			
1968	11	11	0					
1969	31	30	1					
1970	44	41	3		1			
1971	47	45	2		1	1		
1972	55	52	3			2		
1973	57	55	2			1		
1974	61	54	7					
1975	58	52	6		1			
1976	72	61	11			3		
1977	68	57	11		1	2	2	
1978	65	50	15			5	1	
1979	66	55	11		2	3		
1980	62	46	16			6		
1981	61	43	18		1	1	1	
1982	69	48	21		4	1	1	
1983	65	46	19	1	1	1	1	
1984	67	43	24			3	4	
1985	65	40	25			2	1	
1986	65	42	23	1	1	3	3	
1987	62	45	17		4	1		
1988	55	34	21	1	5	1		
1989	68	41	27		3			1
1990	62	32	30			2	1	1
1991	61	38	23		2	1		
1992	68	38	30		3	3	1	
1993	63	23	40		3	2		
1994	61	31	30		1			1
1995	70	36	34				1	
1996	65	35	30		1	2	1	
1997	68	32	36					
1998	64	31	33					
1999	75	37	38		1			1
2000	66	33	33		4	2		
2001	77	39	38		4	1	1	1
2002	74	28	46		7			
2003	75	33	42		8	1	2	
2004	63	28	35		10	1	2	1

Chronology of Indiana University School of Optometry History

- Late 1930s, Early 1940s** John Davey and Noah Bixler talk about their dream of having an optometry school at Indiana University
- 1944** John Davey, Noah Bixler, and Irvin Borish meet with IU President Herman Wells and IU Vice President and Dean of Faculties Herman Briscoe about the possibilities of starting an optometry school at IU
- 1945** Indiana Association of Optometrists forms the School Committee to initiate efforts to start an optometry school. The committee is headed by John P. Davey, with Noah Bixler, Irvin Borish, Galen Kintner, and Loyd Wedeking as members.
- 1947** IU Board of Trustees approve the request of the Indiana optometrists to start an optometry school
- 1948** Board of Trustees rescind their approval due to the opposition of the IU School of Medicine
- 1948** Kenneth Kintner and Robert Tubesing replace Noah Bixler and Galen Kintner on the Indiana Optometric Association School Committee
- 1949** A bill is introduced into the Indiana legislature to start an optometry school, but the bill fails; Indiana optometrists strengthen their resolve to start an optometry school in Indiana
- 1949** C. Earl Fisher is added to the Indiana Optometric Association School Committee
- 1950** Indiana optometrists begin organizational efforts for the next legislative session
- 1951** Legislation passed to start the school (House bill no. 199); the bill passed by overwhelming majorities due to efforts of the Indiana optometrists in contacting their legislators and the lobbying efforts of John Davey and IOA president Virgil McCleary
- 1951** First pre-optometry curriculum offered at IU
- 1952** First Director of the optometry program, Henry Hofstetter, starts work in Bloomington drawing up the professional curriculum, ordering equipment, etc.
- 1953** First professional optometry classes start; the optometry program is the Division of Optometry, a division of the College of Arts and Sciences; laboratories are held in the Student Health Building which was located behind Jordan Hall; optometry curriculum is three years after two years of pre-optometry
- 1953** The first faculty consists of Henry Hofstetter, Merrill Allen, and Stanley Rafalko
- 1954** Ingeborg Schmidt and Neal Bailey are added to the faculty
- 1954** The graduate program in physiological optics enrolls its first students - Paul Lappin, L. Ray Loper, and William R. Baldwin
- 1955** Gordon Heath added to the optometry faculty, along with several part-time instructors
- 1955** The School's Optometry Clinic opens in Jordan Hall. The first patient is pre-optometry student Ray Detraz, who would later graduate from optometry school in 1959
- 1956** First graduates of the optometry program - 16 receive the Masters of Optometry degree
- 1956** First MS degrees in physiological optics granted - to William R. Baldwin and L. Ray Loper

- 1959** The Optometry Clinic moves to Foley House at 744 East Third street
- 1962** Miriam (Stemle) Boyd becomes the first female graduate of the IU optometry program
- 1962** First PhD degrees in physiological optics granted - to Robert Mandell and John H. Carter
- 1965** Establishment of a four year optometry curriculum to grant the OD degree
- 1965** Commitment from the university to construct a new optometry building
- 1965** Approval of an optometry branch library to be housed in the new building
- 1967** Optometry Building completed
- 1968** Dedication ceremony of the new Optometry Building
- 1968** International Conference on Visual Science, co-sponsored by the American Optometric Association and IU, held in Bloomington in conjunction with the building dedication ceremony
- 1968** First OD degrees given
- 1970** Gordon G. Heath became Director of the Division of Optometry
- 1971** Optometry Technician program established
- 1972** Community Eye Care Center established
- 1973** Summer Institutes in the Health Professions program established to bring minority and disadvantaged high school and college students to Bloomington to learn about college life and health career opportunities
- 1975** The Division of Optometry becomes the School of Optometry
- 1980** Two year training program for opticians established
- 1987** Technician and Optician programs combined into one program
- 1988** Jack W. Bennett became Dean of the School of Optometry
- 1988** Development of a clinic in Indianapolis adjacent to the IUPUI campus
- 1992** Indianapolis Eye Care Center at 501 Indiana Avenue opened
- 1995** Borish Center for Ophthalmic Research dedicated
- 1998** IU starts publishing the Indiana Journal of Optometry (a journal of the same name was previously published by the Indiana Optometric Association a few decades ago)
- 1998** Remodeling and expansion of facilities of Community Eye Care Center at 11th and Monroe in Bloomington
- 1998** Gerald E. Lowther became Dean of the School of Optometry
- 2000** Opening of an IU optometry clinic in Guanajuato, Mexico

- 2000** Phase One renovation of the optometry clinic on the second floor of the Atwater Avenue building began
- 2000** IU School of Optometry started its Rural Health Clinic Program
- 2001** Phase Two renovation of the optometry clinic on the second floor of the Atwater Avenue building completed
- 2004** IU Eye at Carmel started as a joint venture of the IU School of Optometry and IU Department of Ophthalmology
- 2004** Remodeling of the room 105 lecture hall in the Optometry Building

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