OPINION

Wanted: Effective Optometric Education
You Can't Please Everyone; You Can't Do Everything; The Time has Come to Probe the Perspectives.

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Today, we are hearing much about the need to re-evaluate the present status of optometric education. We hear that we have narrowed our vision into medically-oriented parameters.

Alas, the "uniqueness of optometry" is now a goal of blurred focus! But is the answer that alternatives are needed or merely a change of orientation?

There are those who are happy to see things stand as they are, because they are currently working. Beyond the immediate issue of the fee for vision assessment, adjusted to cost-of-living increases, concern of government funding of health and education does not attract their attention.

There is also a steadily increasing aggregate whose attention is rigidly maintained on the practical aspects of professionalism. But, in tough economic times, an innovative purist policy is disenchanting in the face of entrepreneurial downgrowth.

My intention is not to defend any of these viewpoints. It is, rather, to look ahead, to appraise today's options with a view to tomorrow's policies and to offer ideas for effective action.

Are you, as an optometrist, able to calculate cost effectiveness or make a cost benefit analysis before buying a new diagnostic tool? Did your school teach you to do this?

Do you know how to interact with bankers, attorneys, building contractors, architects and property managers?

How will you alter your practice as it is affected by a changing distribution in age, socio-economic status and racial composition of the population?

Do you know how to plan, conduct and interpret a health care market analysis?

How much education did you get in cost containment and health economics? As a student, were you made conscious of the costs of optometric services? Are you now? Did you ever discover, or were you ever told, whether this service was available at a lower price elsewhere? (The Department of National Defence currently hires retinoscopy technicians as ophthalmology aids.) Learning to restrain your fees will be important knowledge when you are faced with the fact of your services being a taxable employee health benefit. When you affiliate with a group practice or clinic, are you aware of the running costs, including support staff? Do you know what it costs to repair the diagnostic equipment you use but did not have to buy?

What happens in the event of physical disability?

Have you ever had any formalized lifestyle management training? Practice management alone is not sufficient. Types of practices, part-time practices and optometry as a temporary career (say as a prelude to political involvement) are all valid topics for consideration.

Exposure to a working optometric practice may provide the student optometrist with valuable insight into the problems and rewards of an optometric career. Is it feasible to have students spend some of their school year in actual optometrical practices? What about the value of observing the wise use of para-optometrical personnel, or its opposite, an office run with no ancillary staff whatsoever?

Is there a need to teach optometrists how to counsel their patients? Pre-surgical cataracts and low vision are both stress producing situations. The optometrist is in a position to teach such patients to help themselves as far as possible rather than rely on others. By using learned techniques of identifying and defining problems, behavioural analysis, stress reducing skills and dealing with depression, the optometrist need not rely on referral to a psychotherapist.

The importance of nutrition in eye health is barely touched upon in the present curriculum. Pediatric and pathology courses make only passing mention of it and yet, in our offices, we may regularly encounter people experimenting with vegetarianism, isolated dwellers lacking Vitamin C and fad dieters.

If one is to create such a thorough curriculum, the problem becomes one of designing an optometrical education program that not only maintains the best

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that it presently offers, but also includes training in many of the non-optometric, but equally necessary practice skills. There is, however, no consensus of direction. Do we want to experiment with our optometrical education process? If so, in which areas: philosophy or methodology? And, if we decide on a change, how will we predict the outcome, and what methods do we have of evaluating the change systematically? Suppose we downgrade some aspect of current optometric education, say, ocular pathology — could we retrace our steps if it turns out to be a bad decision?

As an institution for optometric studies, a university devoted mainly to engineering and computer sciences provides not only a solid scientific foundation but, oddly, a highly medical one. In a university setting where the scientific foundation is more broadly based than a medical school, students may avoid the situation of having faculty highly specialized in providing only a medical curriculum. Because of our original conflict with medicine, we approached optometric education with the attitude of getting it out of the medical environment, but now we may need to examine the possibility of establishing a new relationship. For example, a person trained in optometry and teaching pharmacology will not have an understanding comparable to someone trained in medicine with a subspeciality in pharmacotherapeutics.

Medicine has already begun to rethink its student selection process. The holistic health movement is a growing reaction to what are perceived as increasingly uncaring orthodox medical practitioners. Now look at optometric education. The scholastic program is mapped out for students on a day-by-day, hour-by-hour basis. They very seriously apply themselves to the agenda in much the same way as a 1940's optometrist worked through the properly numbered sequence of the OEP examination. They have impressive B.Sc. or science backgrounds, but how many are idealistic, enthusiastically humanistic people? But then, how much of their education even considers a holistic approach to patients? What good is correctly prescribing a flat-top bifocal for a ten-year old, without attention to the significance of that child's emotional reaction to it? How often will an optometrist consider the potential change in personality that a first pair of glasses may cause?

In addition to producing a qualified optometrist, the optometric educators should set themselves the secondary goal of graduating an empathetic practitioner. The future optometrist will be required to display a basic capacity to relate to increasingly inquisitive patients. The "mystery" of health care is no longer blindly accepted as such by an educated public. They want to know what is happening — not only regarding their problems, but also what is being accomplished by a particular corrective measure.

How do we go about producing the graduate who can effectively deal with the patient as a person, not merely as a case? To start, some of the students' day or week may be given over to discussion with staff members about how the various departments in the school are run, what problems have arisen and how they have been solved. Not only will insights into an academic optometrist's life develop, but insights into optometry in general. Insights into oneself and, ultimately, into the future patients' lives will follow.

As modern data gathering techniques are more and more switched to electronic methods, M.D.'s are spending less time listening to their patients, but will shunt them from one specialized technician to another. Optometrists can still deal with people on a one-to-one basis throughout the visual assessment.

This is not to advocate going too far the other way! Compassion is a component of our care, but most patients will still come to us to identify a specific problem and to have it treated quickly and efficiently. Our knowledge of scientific skills, in other words, must not be diluted by over-attention to the more nebulous art of dealing with people. Underdeveloped as it is, psychological training should not supersede our scientific training. Behavioural science will be important to the training of the future optometrist, but optometric education is basically a physical science and, even though scientific and technical data are bound to change, the premise of aiming for precision stands.

The large part of the optometric student's education should be designed so as to allow self-teaching. Post-graduate courses, continuing education and audio-visual cassettes are all useful methods. But even more important is the training of techniques. Education is always evolving and what is learned in school today can be re-evaluated tomorrow by entirely new data. Optometrists today must be capable of structuring their own learning to keep up with this new data, even if they never see another teacher. By extension, this necessitates a familiarity and capability with modern research methodologies, like library usage skills, including reference assistance, interlibrary loans, computerized literature searching, audio-visual programs and computer assisted instruction. It is valuable to know how to use current literature to answer specific questions, how to find the relevant published article, read it critically and appreciate areas of controversy.

One cannot address a subject like optometric education without considering its cost. But how is the funding to be allocated? How much should go to research which produces no immediate benefits? Research is expensive, but one means of saving money is to restrict the use of expensive diagnostic tools. Students, for example, can still be taught how to gauge intraocular pressure by palpation and the use of the simpler tonometers, rather than by

routinely getting readings by Goldmann or air-puff methods.

On one issue, however, there can be no question of pinching pennies. Expensive or not, optometric education must be thoroughly involved in computer technology to educate for the future. The microchip revolution is over — it *governs* us today. But there comes a point at which the new technology is too expensive for any individual optometrist's use. At the institutional level, however, research will, and should, continue to make available new diagnostic and therapeutic technologies. Students must be educated in these areas, even though they themselves may seldom get access to such sophisticated equipment. Ongoing high-tech research into vision at the school will acquaint the student with future trends and the need to evaluate present practice in such terms.

High-tech is not solely applicable to academic research within the school, however, — another component is microcomputer education for the practitioner. As a teacher, the computer is useful in reducing the need for full-time access to teaching personnel. Further, a computerized tutorial can be structured to the benefit of the student requiring an individualized program because of factors such as insufficient background teaching, absenteeism or a need for remedial aid. There are already health education packages commercially available.

Simulation techniques, when programmed into computers, are less expensive and less time-consuming than to bring in patients with known diseases. The computer becomes both simulated patient and individual instructor. By working towards the development of computerized instruction, educators will acquire the ability to assess the efficacy of such instruction and to make recommendations about the design of future studies. Computer-based instruction is a step toward computer-based research design.

Another teaching method under-utilized by the optometric profession is the writing and publishing of case reports, either alone or in collaboration with another author. One of the requirements of acquiring fellowship status is the submission of case reports. Reporting unusual cases puts the average optometrist in the role of an occasional teacher and one needs to know what relevant points to cover as well as how to inject some style into the writing. Submitting it in proper form, use of illustrations and graphs, purchasing reprints and copyright are all aspects requiring precise knowledge.

What is required to communicate with an audience who lacks the understanding of one's professional peers? Very few optometrists have had any direct experience in dealing either with government or with other health professionals in a government setting. Even the wording of a simple statement can be a forbidding exercise to a practitioner the first time it is asked of him or her. One has to take into account the different information needs of the public, federal and provincial governments, private insurers and even hospitals and other health care facilities.

It becomes clear that we need to have more knowledge of sociology, communications, economics, epidemiology, appropriate sections of the law and the functioning of government.

In our schools, we need to develop leaders who will be capable of convincing government of the need to support scientific inquiry. As part of a university, optometric education is, by definition, engaged in educational research. Research has overhead costs not usually considered by most government grants and the optometrist needs a certain amount of accounting expertise to define the parameters of these expenditures.

New research money, as it happens, is getting more and more difficult to acquire. As a result, some very worthwhile projects are simply not being initiated. One solution might be found in a pooling of interdisciplinary resources. Some curriculum subjects are relevant to all or most of optometric, medical, pharmacy, dental, nursing and bioengineering students. Pharmacology and pathophysiology are two examples of knowledge which can be lectured on a rotating basis. Students could attend the lecture at a teaching hospital or, alternatively, staff from the medical (or other) faculty could travel to the students and stay for periods of one to four months per year.

If research efforts continue to be frustrated because of lack of funding, faculty turnovers may begin to occur at a rate which will disrupt both the functioning of the school and students' educational programs. There will also be a removal of accumulated administrative expertise. The benefit to students of clinical and teaching faculty members who exercise a strong role-modelling effect will also be lost as lengthy or frequent sabbaticals are taken. A student no longer sees any incentive at all to pursue a research or teaching career.

If necessary, optometric educators may need to advocate a change in the health care system itself. The system may be saying to the profession, "If you can't reform yourself, then I will reform you."

It is time to start teaching the students some negotiating skills. We may not be speaking with one voice as a homogenous group, but we all have to co-operate nationally to insist on a curriculum which will meet the demands of tomorrow's graduate. There are no alternatives. The public will let us know if we don't.