



## From 1979 to 2002 – A personal perspective

**Former Vice President Professor Desmond Fonn recalls the background to the founding of IACLE and charts the association's evolution from its early days in Europe to an organization with a global structure and industry investment**

1971 is an important date because it was the year that the United States (US) Food and Drug Administration approved the sale of soft contact lenses (SCLs) as a medical device. Of course, SCLs were available in many other countries of the world before then. Within a relatively short period of time, Bausch & Lomb (B&L) in Rochester, New York, who had acquired the rights to the HEMA 'SofLens', became the world leader in sales of SCLs. B&L realised the importance of education of eye care practitioners on this new modality and sponsored (what was to become an annual event) the National Research Symposium on Contact Lenses in the US.

The Association of Optometric Contact Lens Educators (AOCLE) whose members represent optometry schools in the US had its inaugural meeting in Chicago in 1974. As a group they were invited to attend B&L's sponsored National Research Symposium (NRS) in Rochester, New York to conduct their own business/education meeting the day prior to the NRS. B&L saw the value in embracing AOCLE as a group of contact lens educators by offering to host a one-day meeting tagged on to the NRS and exposing this group to the latest research on contact lenses who may have otherwise been unable to attend. This arrangement continued for as long as these symposia continued, and for a period after, when B&L hosted AOCLE at its headquarters in Rochester on an annual basis. Without influence, both B&L and AOCLE derived much benefit from this collaboration.



Brien Holden (Figure 1) was to become a moderator at all of B&L's NRS meetings. From the mid-70s, Holden travelled to the US each year and always included a trip to B&L in Rochester. By that stage Brien had developed an international reputation as a scientist with a focus on contact lens research and both R&D and upper management at B&L were taking notice, which explains why Brien was invited to become a moderator at NRS. Brien's primary motivation in visiting B&L was to secure funding for research on contact lenses and their effects on the eye. This magnificent 'partnership' grew and flourished for the next three decades.

**Figure 1. Brien Anthony Holden (courtesy of BHVI)**

Because of the immense success and stellar reputation of the NRS, B&L wisely decided to introduce similar symposia in Europe in the late-70s and in Asia and Latin America in the 80s. It is my belief that the B&L /AOCLE model, and the influence and recognition of Holden at B&L, were more than coincidences in the founding of what was to become the International Association of Contact Lens Educators (IACLE).

## **The first meeting**

Shehzad Naroo and Alison Ewbank have described the first meeting of contact lens educators (the majority of them being European) that gathered at the B&L European Research Symposium on Contact Lenses (ERS) in Monte Carlo at the invitation of B&L [1]. Dr George Mertz, who was Director of Optometric Research at the B&L clinic in Rochester, acted as the facilitator for this meeting of educators. Another coincidence was that Mertz and Holden had become friends because of the research that Mertz was conducting during his tenure at B&L and Brien (as ~~was~~ mentioned previously) visited B&L at least once every year prior to 1979. Was this another coincidence that Mertz was involved in the educators' meeting at the ERS that ultimately led to the formation of IACLE?

It was well known that the standard of contact lens education varied significantly across Europe and internationally at that time, so this seemed like an extraordinarily great opportunity for educators to assemble at B&L's expense for the purpose of exchanging information on all aspects of teaching contact lens practice. While the attendance at these meetings included educators from non-European countries, IACLE meetings of educators would become very Eurocentric for the obvious reason that we were meeting in Europe each year at the ERS. This was a magnanimous contribution by B&L but they must have seen an opportunity in partnering with IACLE to further educational efforts, although B&L never overtly attempted to promote their products or company at these meetings.

B&L also staged an exhibit of 35mm slides at the educators' meeting that were of great interest to the attendees. B&L had produced a slide series which was the work of Holden and Zantos who developed a technique of photographing the corneal endothelium using high magnification specular microscopy using a slit-lamp biomicroscope. This stemmed from Steve Zantos' observation of 'blebs' on the corneal endothelium in patients who were wearing SCLs. This series was of great interest to the attendees, as well as all of the other slides that were produced by B&L, which led to the agreement that members would bring their slides to future IACLE meetings and donate them to IACLE to facilitate an exchange of slides by members. This was the forerunner for distribution of teaching materials through IACLE to members, which included slides, videos, syllabi and lectures. The outcome and conclusion from this meeting of about 16 educators was that IACLE was founded and we would meet again the next year at the ERS in London and continue doing so for many years with the assistance of B&L. 'The Early Years: 1979-1993', published on the IACLE website to mark IACLE's 40th Anniversary, describes the next meeting, in London in 1980 [2].

## **Registration and board**

Although the attendees in Monte Carlo in 1979 are credited with being the founding members of IACLE, it was the next meeting in London in 1980 where IACLE was officially founded [3]. IACLE became an official association after registration in Switzerland. In those early days there were no formal membership application procedures to become members of IACLE. Educators attended the annual meetings in the 80s mostly by being invited to attend the B&L ERS. These symposia became very popular in Europe because of the excellence of the symposia and the provision of new research information that was so important to the understanding of contact lens science and practice. The symposia were also held at some of the most splendid venues in Europe and the social events were spectacular. B&L spared no expense resulting in at least 1,000 delegates attending each symposium. So, our IACLE meetings grew commensurately because educators were offered the exposure to new teaching information and teaching materials (mostly 35mm slide images of contact lens-related conditions) to be shared, and the opportunity to be part of a network of educators in Europe.

The first IACLE 'Board' consisted of President Hilmar Bussacker, Vice President Brien Holden and Secretary John de Brabander. By 1985 Don Loran from the UK took over as Secretary from de Brabander at the meeting in Vienna. Deborah Sweeney from the Cornea and Contact Lens Research Unit in Sydney, Australia, who worked with Holden, was enlisted to organize and run the IACLE meetings. This arrangement continued until 1991 when the Executive Board was reconstituted and expanded to include a Treasurer, Assistant Treasurer and Assistant Secretary. The names of those Board Members are listed in a table in the 'Early History' document [2].

## **The impetus to change**

By 1991 it was estimated that the membership of IACLE was 50, representing 15 countries, and considering the association was already 12 years old that number was less than impressive. There were a number of reasons that this number was so low. There was no recruitment drive and only one meeting a year in Europe at the ERS with modest incentive to attend as there was no follow-up between meetings. There was also a sense that it was just more of a one-day social gathering at the ERS than a true educational event.

While all of the B&L personnel who were responsible for organising the ERS provided secondary support for IACLE members to attend, one individual (Dr Juan Carlos Aragón) stood out from his B&L counterparts because he saw the value of establishing a genuine and serious association of contact lens educators. Aragón had known Holden from 1987 but really befriended him when he took over the responsibility of the ERS in 1988. That was the year that IACLE changed from a 'social club' to a serious educational organisation with global aspirations. Aragón committed a \$1 million grant over 4 years beginning in 1989 for IACLE to become a global enterprise of contact lens education which Holden gladly accepted [2] and the rest is history, as they say.

## Regionalisation and membership

After 1992, IACLE became a truly international organization that was committed to worldwide advancement of contact lens knowledge through education of its members to disseminate their knowledge to practitioners and students, particularly in regions and countries where contact lens practice was less developed [4,5]. IACLE's operational regions were Africa-Middle East, Asia Pacific, Europe and Latin America. IACLE also established a link to the AOCLE in North America and derived much benefit from that association. Office-bearers of both the Executive Board and regional groups were elected to serve for a two-year term of office.

The mission of IACLE was to:

- Raise the standard of contact lens education throughout the world
- Substantially increase the number of contact lens educators worldwide
- Provide an international forum for the exchange of ideas and information among contact lens educators
- Help develop the educational infrastructure for eye care throughout the world

Membership of IACLE was open to any full or part-time educator who was significantly involved in contact lens education, being a member of the teaching staff of a recognised teaching institution. Membership was open to educators/practitioners of any ophthalmic profession. As a result of interest expressed by those who did not fall into the category of *bona fide* educators as described above, eg practitioners who were providing continuing education or were members/employees of the contact lens industry, these individuals were deemed eligible for Associate Membership. (These regulations have been streamlined since the inception of the procedure and are described on the IACLE website, [iacle.org](http://iacle.org)).

The British Universities Committee of Contact Lens Educators (BUCCLE) was formed in 1980, with a constitution similar to the AOCLE in that the membership was essentially the institution and contact lens educators represented that institution as members. This differed from IACLE where educators became members and had to pay dues. BUCCLE became an affiliate organization of IACLE and IACLE's Executive Board included a representative of the AOCLE. IACLE relied heavily on both the AOCLE and BUCCLE for their expertise and mature development of their contact lens courses.

At the outset there was deliberation about membership fees of IACLE. It was decided that a reasonable annual membership subscription would be \$100 but the difficulty was this was beyond the affordability of many potential and existing members in many countries. Even at the \$100 rate, a few hundred members (we were not sure how many educators IACLE would attract to membership) would hardly provide any meaningful subsistence to the organization, but like most other not-for-profit organizations subscriptions were introduced so that members would feel they were contributing to the association. To overcome the difficulty of disparity in affordability, the decision was taken to adopt the Purchasing Power Parity (PPP) principle. This is a calculation which takes into account gross national profit as well as strength of the local

currency. The IACLE PPP scale of 1-5 was derived from estimates of organizations such as the United Nations. So, members from Group 1 countries would pay 10% of the membership fee and members from countries in Group 5 would pay 100% of the fee. In effect IACLE subsidized those members who lived in countries ranked 1-4. IACLE used this formula to price its resource materials and travel sponsorship dollars as well. Associate Members paid the full fee for membership and resource materials.

## **The Executive Board and Regional Executive Committees**

The magnanimous initial grant from B&L was the stimulus for IACLE to become a truly global enterprise. The new Executive Board in 1991 was responsible for determining the structure of the global organization, which included supporting the elections of the Regional Boards in the four regions and rewriting IACLE's Constitution. The other major development and accomplishment at this stage was the approach to the other large contact lens and lens care companies for funding.

### **IACLE members who served on the Executive and Regional Boards in the 80s and 90s**

<b>Executive Board</b>	<b>Position</b>	<b>Country</b>
Brien Holden	President	Australia
Desmond Fonn	Vice President	Canada
Deborah Sweeney	Secretary	Australia
Charline Gauthier	Treasurer	Australia
Nathan Efron	Assistant Treasurer	United Kingdom
Luigina Sorbara	Assistant Secretary	Canada
Richard Lindsay	Assistant Treasurer	Australia
Hilmar Bussacker	President	Switzerland
John de Brabander	Secretary	Netherlands
Don Loran	Secretary	United Kingdom
<b>Regional Boards</b>	<b>Africa Middle-East</b>	
Jannie Ferreira	President	South Africa
Dan Sheni	Vice President	South Africa
Sonja Cronje	Secretary	South Africa
	<b>Asia Pacific</b>	
Robert Conway	President	Hong Kong
Maurice Yap	President	Hong Kong
Gullapalli Rao	President	India
John Ang	President	Hong Kong
Sinji Seki	Vice President	Japan
Norhani Mohidin	Vice President	Malaysia
Carly Lam	Vice President	Hong Kong
Xui-Yin	Secretary	China

Ana Fajardo	Assistant Secretary	Philippines
Meredith Reyes	Assistant Secretary	Australia
Vicky Shuley	Assistant Secretary	Australia
	<b>Europe</b>	
Hans Bleshey	President & Secretary	Denmark
Michel Guillon	President	United Kingdom
Luigi Lupelli	Vice President	Italy
Michael Port	Vice President	United Kingdom
Nathan Efron	Secretary	United Kingdom
Judith Morris	Secretary	United Kingdom
Sudi Patel	Secretary	United Kingdom
	<b>Latin America</b>	
Fernando Ballesteros	President	Colombia
Gianfranco Luongo	Vice President	Mexico
Hector Santiago	Secretary	Puerto Rico
Carlos Serano	Vice President	Venezuela
Alberto Milla Quiroz	President	Mexico
Jose Julio Torrez	Vice President	Mexico
Myriam Mayorga	Secretary	Colombia

A system of supporting the Executive and Regional Boards was the selection of co-ordinators. The function of the Regional and National Coordinators was to promote IACLE, to identify and recruit educators to become members of IACLE, to strengthen communication between members and the regional and national networks, and to organize member meetings that would be held in conjunction with regional and national symposia. These meetings proved to be excellent methods of recruiting contact lens educators who would otherwise not attend the symposia. By this stage other corporations became IACLE sponsors and some of the employees took on the roles of coordinators as they had direct contact with the institutions and therefore IACLE members and potential members. They operated in support of the Regional and National Co-ordinators, and their in-kind contribution was invaluable in growing and promoting IACLE and supporting contact lens education.

### **Global, Regional and National IACLE Coordinators in the 90s and early 2000s**

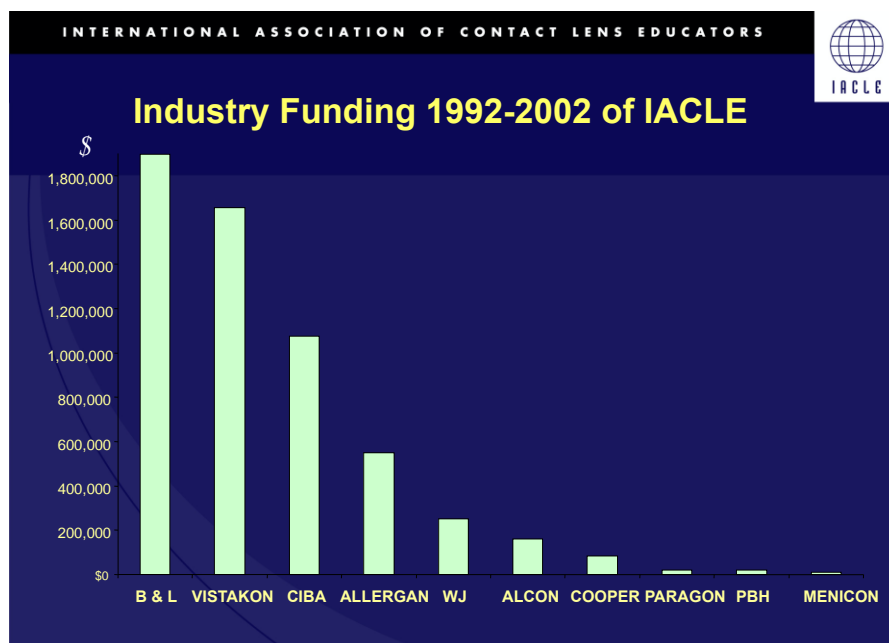
Pamela Capaldi	Global	
Percy Lazon de la Jara	Latin America	
Joseph Hartman	Latin America	(Ciba Vision)
Juan Carlos Aragón	Latin America	(Ciba Vision)
Ian Davies	Europe	(Vistakon)
Greg Wu	Asia Pacific	(B&L)
Johan Van Der Westhuizen	South Africa	(Vistakon)
Alberto Milla Quiroz	Mexico	

Alma Dilya Ruiz	Mexico institutions	UNAM
Jose Luis Monroy		UNAM
Jose Julio Torres		IPN
Charlie Ho	Philippines	
Meredith Reyes	Philippines	
Cheni Lee	Indonesia	
Arvind Saluja	India	
Ghanshyam Singh	India	
Lakshmi Shinde	India	
Lu Fan	China	
Qu Jia	China	
Chen Hao	China	
Frances Iwagwu	Africa	
Michael Port	United Kingdom	
Magne Helland	Scandinavia	
Bernard Barthélemy	France	
Jo Deferme	Benelux	
Peter Moest	Germany	
Carlos Saona Santos	Spain	
Mihaly Vegh	Hungary	
Pavel Rezek	Czech Republic	

## Industry support for IACLE during the 90s

A most extraordinary collaboration began in the 90s between IACLE and the contact lens industry. This followed the initial grant by B&L for IACLE to become a global organization that would offer and encourage contact lens educators at *bona fide* teaching institutions the opportunity to become members to improve their knowledge and skills. All credit has to go to Juan Carlos Aragón and Brien Holden for convincing Ronald Zarella, President of B&L's International division, to contribute that first US\$1 million grant over 4 years from 1989.

Holden knew that the endeavour of globalizing IACLE would take a lot more than this grant and, with the encouragement of Aragón, began to approach the contact lens industry to become donors of IACLE. We were really astonished at the positive response from the large contact lens and lens care companies (who were naturally fierce competitors) that they would 'buy in' to a rather ambitious goal of raising the standard of contact lens education around the world and particularly in the less developed regions. But how else could this be achieved, as the companies did not have the manpower nor infrastructure to deliver 'education' in the way that IACLE was proposing? So began a wonderful enterprise with the establishment of an Industry Advisory Board that used to meet at least twice each year with the Executive Board.



**Figure 2. Industry funding for IACLE by company 1992-2002**

Figure 2 shows the level of funding from industry from 1992-2002. Full credit must also be given to all the 'champions' at each of the companies. There were many at each company who believed in this initiative but the following individuals stood out during this early period:

Juan Carlos Aragón	George Mertz	Richard Weisbarth	Peter Simmons
Richard Franz	Ian Davies	Dwight Akerman	Joseph Vehige
Joseph Hartman	Stan Yamane	Timothy Grant	Jim Mazzo
Hemanth Paul	Dennis McCarthy	Ross Grant	David Noon
Fred Edmunds	Howard Purcell		
Gary Orsborn	John Meyler		
Ronald Zarella			
Rob Rosenbrand			

Besides the countless millions that industry contributed to the central budget of the organization, these companies also contributed towards the regional and national education meetings in time and money, donated books, videos and slides and participated in the educational programs. The Cornea and Contact Lens Research Unit (CCLRU) at the University of New South Wales has to be recognized for its considerable in-kind contribution through the work of Brien Holden, Deborah Sweeney, Charline Gauthier, Sylvie Sulaiman and their administrative staff. Furthermore, office space was provided within the confines of the CCLRU at the Randwick Campus of the University of New South Wales in Sydney. IACLE now had a rent-free home due to the altruistic aid of Holden and the CCLRU. Desmond Fonn and Gina Sorbara from the Centre for Contact Len Research at the University of Waterloo and their administrative staff also contributed in-kind towards IACLE.



### Contact lens and lens-care companies that sponsored IACLE during the 90s and early 2000s

Bausch & Lomb	Major Corporate Sponsor
Johnson & Johnson	Corporate Sponsor
Ciba Vision	Corporate Contributor
Allergan	Corporate Donor
Wesley Jessen	Corporate Donor
Aspect Vision Care	Donor
Alcon Laboratories	Donor
Ocular Sciences	Donor
CooperVision	Donor
Paragon Vision Sciences	Donor
Menicon	Donor
Pilkington Barnes Hind	Donor

The principle was to spend as much of the income as possible on educational programs and therefore the membership, but it became obvious early on that employment of individuals was needed in administrative and co-ordinating capacities to support the Executive and Regional Boards to build and sustain the organization. From 1990 IACLE began to employ a team of staff although Sylvie Sulaiman is credited with becoming the first paid employee, in 1992.

### IACLE's first staff members

Those first members of staff were to have a key role in IACLE's development. Here we describe the part each of the team played from the early 90s:



**Figure 3. Pictured left are IACLE employees with Executive Board member and Secretary Dr Debbie Sweeney (second right): Sylvie Sulaiman, Pamela Capaldi and Sandy Hunt-Sharman. Pictured right is Yvette Waddell (left) with Hunt-Sharman, Sulaiman and Capaldi**

**Pamela Capaldi** began working part-time for IACLE, from her home in Golden, Colorado. Within a year she was appointed as a full-time Global Coordinator. Pamela was actively involved in recruitment and membership records, educator fellowships, textbook and journal distribution, reproduction and distribution of educational videos and writing newsletters and press releases. She played a major role in organizing Executive Board meetings that were primarily held in the US in conjunction with the American Academy of Optometry and Association for Research in Vision and Ophthalmology. Because of her location, Pamela interacted mostly with Percy Lazon de la Jara as the Latin American Coordinator and they were responsible for orchestrating the regional and national meetings in Latin America with Desmond Fonn.

**Sylvie Sulaiman** joined the ranks of IACLE in 1992 as a part-time employee from being a research optometrist at the CCLRU. Within a year she was appointed as Manager of Education on a full-time basis, and the following year became the Director of Education. Sylvie spent most of her time developing new teaching materials for IACLE which included the early phase of the teaching modules, later to be known as the Contact Lens Curriculum or Course. A good deal of her time was spent as a presenter at the regional and national meetings. Another of Sylvie's commendable contributions was in the development of the IACLE Accreditation system which became the Fellowship Examination (described further in the section on Education Programs). The decision was to accredit members as Fellows of IACLE (FIACLE) after achieving a satisfactory result in the examination.

**Sandy Hunt-Sharman** was appointed as IACLE's first Executive Director in July 1993. She served in this capacity until 1997. Sandy's experience from the contact lens industry and her vast network stood IACLE in good stead for the 4 years she was with the organization. With Yvette's assistance, Sandy established the Office of IACLE. President Holden said: 'Sandy's ability to shift mountains (and immigration and customs officials) are legendary. Without her, many of our African and other developing country colleagues would never have made it to our IACLE meetings.' Besides being a great Director, Sandy was a real hands-on person.

**Yvette Waddell** began her IACLE career at the end of 1992 as IACLE Secretary and initially reported to Debbie Sweeney and Holden until Sandy Hunt-Sharman's appointed the following year. Soon after Sandy's departure in 1997, Yvette was promoted to Director of Administration. Yvette was involved primarily in member relations and establishing the office administration. Yvette's tenure lasted until October 2000 when she joined the full-time force at the Brien Holden Vision Institute (BHVI). She wrote: 'Putting my business hat on, IACLE was a pretty inspirational business model back then that worked, and it still does today. How IACLE handled educators, students, researchers, clinicians and industry personnel – its education model was really innovative.'

**Lewis Williams** joined IACLE in mid-1994, after almost 8 years with CIBA Vision Australia and New Zealand. Lewis, an optometrist, became a part-time employee for the express purpose of drafting the first module of the Contact Lens Curriculum Lecture 1.1 (Anatomy & Physiology of the Eye). By March 1996 he was a full-time IACLE employee working on the curriculum project almost exclusively. Lewis was responsible for preparing all lectures for review by the project's

Editor-in-Chief, Desmond Fonn. Many of these lectures were not written by him from scratch but obtained from a variety of experts from Australia, US and the UK, and Lewis adapted them for the IACLE Curriculum (which was to become the IACLE Contact Lens Course, ICLC). With Des, they saw the delivery of the 10 modules of the ICLC between 1997 and 2006. Lewis was also involved in projects related to the IACLE Case Report Series, various IACLE Image Collections, the IACLE Distance Learning Program (DLP), the Student Trial Exam (STE), and ultimately the IACLE Fellowship Exams. Lewis started out as a Project Coordinator, then Manager of International Education, then Director of Educational Development. He continued working full-time until 2011 and then switched back to 3 days and then 2 days per week.

**Gail Van Heerden** joined the IACLE team as Administrative Secretary in 1997 and reported to Sandy Hunt-Sharman. As part of her duties Gail became the Project Coordinator which was upgraded to Project Officer in 2005 and she retained that position until she retired in 2008.

**Percy Lazon de la Jara**, an optometrist, began his IACLE career in 1994 in a voluntary part-time capacity while living in Lima, Peru and in 1995 changed to a full-time employee to act as the Regional Coordinator for Latin America. In that role he was primarily occupied with increasing the membership of IACLE in Latin America, organising and attending educational and business meetings, meeting with optometry school and university officials, and presenting lectures to educators and students. Percy continued in that role while still living in Lima and started his part-time PhD studies as a student of the Cooperative Research Centre for Eye Research and Technology at the University of New South Wales. After completing his PhD degree in 2005, he emigrated to Australia and resigned from IACLE to take the position of Project Manager within the Institute of Eye Research (IER). He was then promoted to Head of Clinical Research at BHVI.

**Sonja Cronje** is an optometrist who graduated from the Rand Afrikaans University in Johannesburg, South Africa. She became a faculty member of the Optometry School and started her IACLE career in a voluntary role as the Regional Coordinator for the Africa/Middle-East region in September 1993. It was during this time that she developed the IACLE Distance Learning Program. She had several IACLE members from other African countries who came to Johannesburg to spend time under her tutorship at the university through IACLE fellowships. That role continued as a part-time paid employee of IACLE. Sonja was promoted in 2000 to be full-time Manager of International Education until 2002 when she emigrated to Australia to take the position as Director of Education for IACLE for the period of 2003-2007.

**Bonnie Boshart** joined IACLE in 2001 as Project Coordinator and established an IACLE office within the CCLR at the University of Waterloo. In 2004 she became the Director of Administration and in 2007 was promoted to the position of Director of Operations having all the regional coordinators reporting to her. In 2018 she became the Executive Director which has the responsibility of managing governance, staff, finances, human resources and all operational activities.

**Lakshmi Shinde** joined IACLE in 2000. She was appointed as the India Coordinator on a part-time basis and then in 2006 progressed to become the Asia Pacific Coordinator, still as a part-

time employee. In 2014 she was promoted to Director of Educational Programs as a full-time employee, and in 2018 took on the role of Director of Global Education.

**Barry Brown** became a full-time employee of IACLE in 1998. His primary occupation was graphics support for Lewis on the curriculum project, and creating slides and presentations for all the Sydney Executive. He also was instrumental in designing and building the IACLE website. After a few years Barry was seconded by the IER but continued to support IACLE.

**Shane Parker** was the second graphics employee of IACLE in Sydney such was the volume of design, printing, and supply chain logistics incurred by the ICLC project. Ultimately, after leaving IACLE's direct employ, he rose to the management of all graphics and media activities of the BHVI under the umbrella identity of iMedia, a role that still overlapped with some of IACLE's production activities until the 2000s. He remained at BHVI until 2019.

**Meredith Reyes** moved to Sydney from the Philippines late 1993 and worked for IACLE for the next 3 years. The original concept of the ICLC was to ask leading contact lens researchers and educators from around the world to share their 'best lectures' with IACLE. Meredith was involved with sourcing the lectures and compiling the contact lens syllabus. Meredith worked with Sylvie Sulaiman, and with Lewis Williams when he joined IACLE, and contributed to the drafting of Module 1. In addition, drawing on her father's expertise and resources she was involved in preparing the lecture on ocular prosthetics.

So much of IACLE's success can be attributed to the efforts of the Executive Board, the Regional Boards, countless volunteers and coordinators and of course the industry, but not enough can be said about the dedication and drive of the administration folks that have been highlighted. Nothing less than splendid!

## **The membership**

Figure 4 presents a snapshot of the substantial increase in membership from approximately 50 members in 1990 to 500 over a 10-year period. A marked achievement! The December 2019 figure was 938 members, of which 693 were Educator Members and 245 were Associate Members. Also, consider that in the period from inception 1979 to 1990 the growth from about 20 to 50 members was negligible. The purported reasons have been described under 'The impetus to change' (page 3). Figure 5 is also a snapshot of distribution of global members in the four IACLE regions and North America. The Executive Board and industry claimed this as a criterion of success. The Executive Board's focus on membership growth during that period was in Asia Pacific, central Europe and specific countries in Latin America, which mirrored the Industry Advisory Board's interest in those emerging markets because of large, developing middle-class populations.

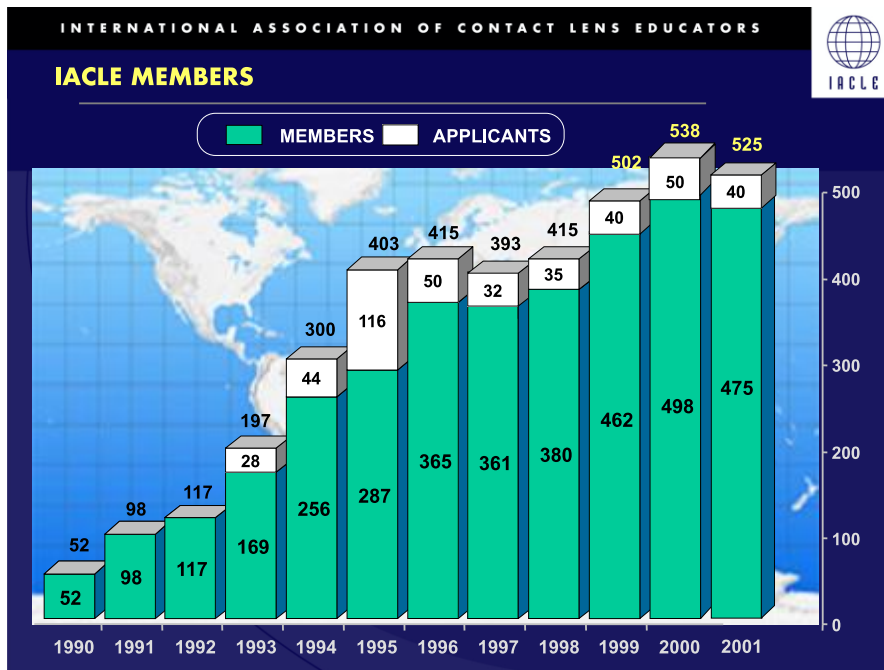


Figure 4. Growth in IACLE membership 1990-2001

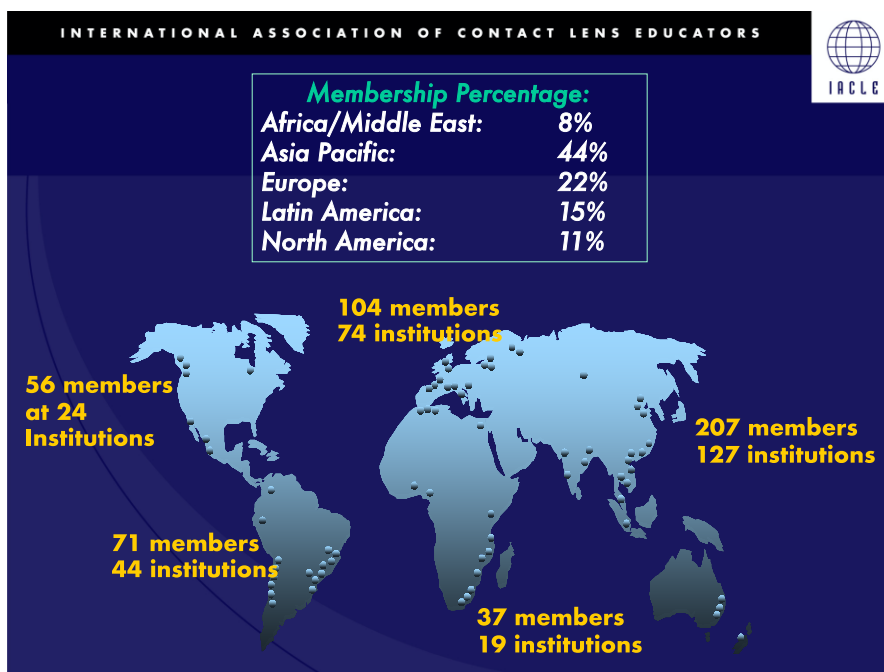
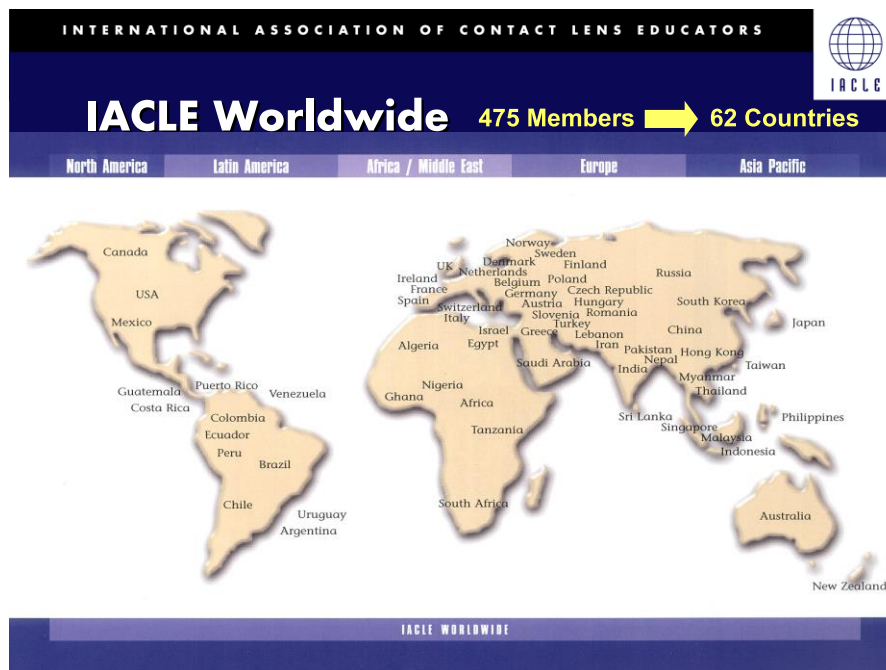


Figure 5. Distribution of IACLE members by global region in 2001

Figure 6 demonstrates another pleasing achievement that IACLE was represented in 62 countries by 2001, suggesting that our growth model of banking on recruitment of new members by holding regional and national meetings in association with conferences was a good one. That model, in addition to the work of the coordinators and coupled with identification of potential members by our industry partners, seemed to be working. Other IACLE programs and resource offerings have also promoted membership growth.



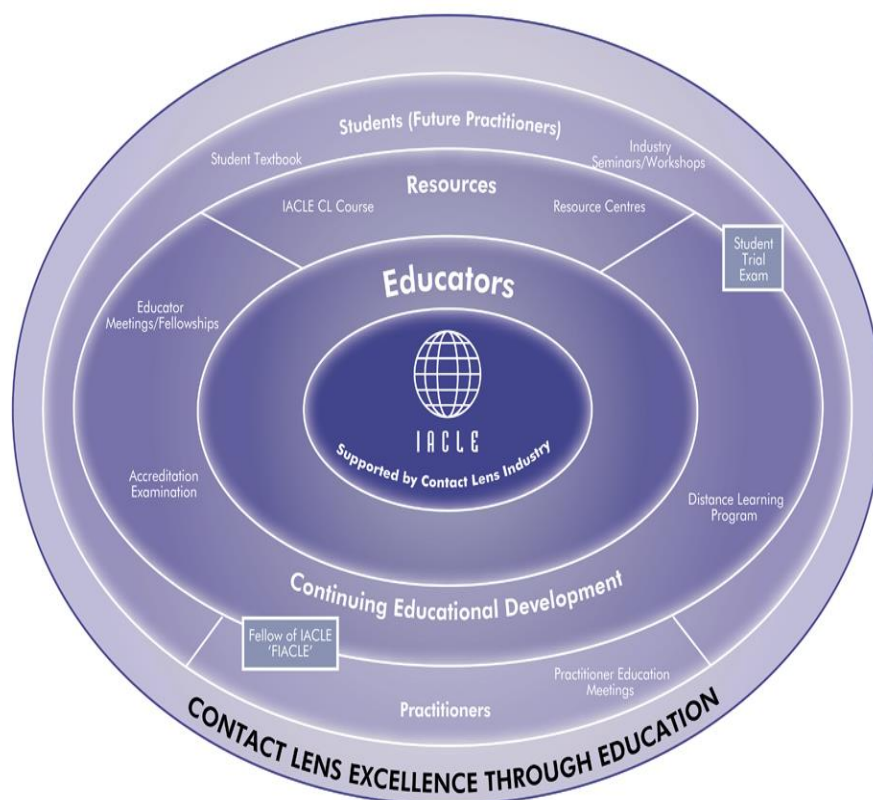
During the 90s, the secretariat, led by Pamela Capaldi, was producing newsletters of activities, new teaching materials as they became available, meeting updates and where and when future meetings would be held, reports from regional and national meetings and press releases; these all designed to keep members and industry informed and enthused. Of course, those were the 'paper days' before we became 'electronified'. Now that has all been surpassed with the brilliant website and electronic mail.

## Education programs

This was and is the cornerstone of IACLE. That it has gone from strength to strength for 40 years and surpassed all expectations with a membership of 938 is a testament to the unparalleled collaboration between educators who conceived IACLE and the contact lens industry. Those were lofty goals we set, but justifiably you could say were achieved. The mission has not changed: to ultimately increase the number of successful contact lens wearers through more knowledgeable contact lens educators, and pass on that wisdom to students who would become confident practitioners. Some might suggest that the correlation between the growth of IACLE members and the increase in the number of contact lens wearers worldwide is a spurious one because of confounding factors such as innovations in contact lens manufacture, access to information through the internet, and affordability of contact lenses and wider availability. However, it is undeniable that contact lens educators have become more knowledgeable (as evidenced by the number of FIACLES – described later) and the vehicle, especially in many developing countries, has been IACLE.

Figure 7 encapsulated the IACLE Education Mission. The two inner rings were the primary intents of focus and the deliverables, followed by the secondary outer ring where the accomplishments would benefit students and practitioners.

**Figure 7. Diagram summarizing the IACLE Education Mission in 2001**



## Regional and national meetings

The exceptional growth of membership numbers in the 90s can arguably be attributed to the educational meetings in the regions. With the help of the Regional Boards, existing members and local industry representatives, IACLE was able to identify educators and therefore potential new members who would be invited to attend IACLE meetings that were invariably coupled to eye conferences and often these were contact lens specific staged by the industry partners. With the help of industry, we were able to identify and prioritize countries that had the greatest growth potential for contact lens wearers and educators.

IACLE documented that, during the 90s, 90 regional/national education meetings were held that provided in excess of 46,000 continuing education hours to 3,290 educators. As examples, In March 1992 the 3rd Asia-Pacific Regional Meeting was held in Manila, Philippines. The meeting at the Centro Escolar University, which was one of five Philippine universities offering a contact lens curriculum, was attended by 29 IACLE members from 14 Asia-Pac countries. That was followed by the 2nd Latin American Regional Meeting at the School of Optometry, La Salle University in Bogota, Colombia in April. It was attended by 26 IACLE members and other educators from the Latin American region in addition to representatives of the industry. The two-day workshop and business meetings were staged prior to the international congress of optometry sponsored by the Federation of Optometrists of Colombia (FEDOPTO) and Bausch & Lomb. In October, the 13th European Regional Meeting was held in two cities. The scientific workshop took place at the Institut de Centre D'Optometric close to Paris and the business

meeting was held in Bordeaux, France in conjunction with the European Symposium on Contact Lenses sponsored by B&L. The IACLE meeting attracted 50 educators, most of whom were IACLE members from both western and eastern European countries, in addition to other international members from Australia, Canada, India, South Africa and the US.

Essentially the educational meetings were designed to do two things: present current information about the science and clinical practice of contact lenses in both didactic and clinical practical sessions and provide a forum for exchange of information; and secondly, provide methods of instruction and assessment of students. More specifically, these were some of the topics that were covered in the three meetings mentioned above: RGP lens fitting, infectious keratitis in contact lens wear, contact lenses for the presbyope, tear film evaluation, the contact lens curriculum, clinical assessment of students, designing examination questions and lecture preparation and use of audio visual materials.

## **Outstanding events**

Two outstanding and memorable regional meetings from the 90s should be memorialized. The first was the largest regional meeting (up to that date) which took place in conjunction with Professor Otto Wichterle's 80<sup>th</sup> birthday celebration. It was held at the Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic in Prague. Approximately 100 educators from Europe attended and the meeting dovetailed with the 'Wichterle's Days of Contact Lenses' conference which industry help sponsor. Besides being at this largest ever gathering of IACLE educators and having a delegation of Czech practitioners who were invited to join the meeting because of their involvement in continuing education, being there to celebrate the inventor of the soft lens at the institute where he conducted his experiments was an amazing experience.

The next was a ground-breaking event during May 1994 in Beijing, China. IACLE sponsored the first Chinese contact lens symposium and IACLE China contact lens educators' meeting. President Holden described the meeting as 'historic' because contact lens fitters and educators from academic ophthalmological and optometric fields convened for this symposium – over 80 people representing hospitals, practices and other institutions. All the corporate sponsors of IACLE contributed to the meeting costs and many industry representatives from the companies attended the meeting. The meeting was organised by the China National Optometry Center, Wenzhou Medical College Department of Optometry and Ophthalmology and the Chinese Association of Ophthalmology. Most of the two-day symposium was devoted to presentations of clinical experience of lens wearers from ophthalmology hospital settings with a focus on contact lens complications. This was followed by a two-day IACLE education meeting with presentations by Brien Holden, Sylvie Sulaiman and Maurice Yap. The outcomes following discussion with delegates at the IACLE meeting were: an urgent need for optician education and continuing need for ophthalmological education on contact lenses, educating the public on contact lenses, the need for IACLE to continue to provide resources to educators and the need to develop and legislate for optometry as a profession.



## IACLE World Congresses

Another ground-breaking educational event occurred in June 1994 – some have labelled it as a ‘game changer’. The CCLR and the School of Optometry at the University of Waterloo in Ontario, Canada hosted the first World Congress on Contact Lens Education which was initiated by IACLE. The annual AOCLE workshop for its members is held in June at a different optometry school in North America so this meeting in Waterloo served as its workshop. Over 150 members of IACLE and the AOCLE (the first time these two associations held a joint meeting) from approximately 30 countries (Figure 8), and many representatives of the contact lens industry, gathered in Waterloo for a week-long meeting.



**Figure 8. The IACLE Executive Board and staff at the 1st World Congress in 1994 (left to right): Yvette Waddell, Sandy Hunt-Sharman, Pamela Capaldi, Brien Holden, Debbie Sweeney, Des Fonn, Charline Gauthier, Richard Lindsay, Fernando Ballesteros, Jan Jurkus, Sylvie Sulaiman and Gina Sorbara**

The University of Waterloo was chosen for this meeting because at the time it had an excellent reputation for its Engineering and Computer Science faculties (and still does) and the School of Optometry was ahead of the game in terms of its research and technological activities, which also applied to the CCLR. The focus for the first World Congress was ‘everything’ technology related to contact lenses and technological advances in education. For the first time members learnt about ‘email’ – what a revelation that was! A full report was published in a brochure by IACLE which can be [accessed on the website](#). Besides the education, the meeting was a blast. Here are two comments from prominent IACLE members: Maurice Yap from New Zealand (at the time) ‘I can’t think of another meeting which has spurred me on to do so much’ and Nathan Efron (UK at the time) ‘This is one of the finest meetings I have ever been to’.

IACLE was so enamored with the outcome of this venture into technology-assisted education that Waterloo was chosen (a more descriptive word may be 'lumbered with', a slang word for 'burdened' or 'stuck with') to repeat the model event just six years later. As the majority of 170 members were those who attended the first World Congress on Contact Lens Education, we (the organizers) were concerned whether a repeat performance of high-level ingenuity could be achieved using the theme of 'Technology, communication and education'. The response to the IACLE/AOCLE 2nd World Congress exceeded expectations and many labelled it as good and as innovative as the first (Figure 9).



**Figure 9. Pictured at the 2nd World Congress (left to right): Ghanshyam Singh, Des Fonn, Gina Sorbara, Julio Torres, Cheni Lee, Debbie Sweeney, Yvette Waddell, Alberto Mila, Sonja Cronje, Percy Lazon, Sylvie Sulaiman, Brien Holden, Pamela Capaldi, Jan Jurkus, Richard Lindsay, Dwight Akerman, Andres Pagan, Diane Bandura, Alan Tomlinson and Gerry Lowther**

One of the most startling presentations was by David Werezak, Vice President of Marketing for Research in Motion, the Waterloo technology giant that produced the Blackberry, the world's first smartphone. He introduced this wireless technology, a handheld device that could function as a cellular telephone and was capable of merging personal calendars, email messages, voice messages and internet applications. Among the other technology presentations/workshops were: Evidence-based practice (EBP), the worldwide web (WWW), using technology for capturing images of the eye, using the technology for measuring ocular response and web-based education, etc. The 2000 World Congress on Contact Lens Education brochure has been [added to the website](#). A full report on the Congress was also published (Figure 10). Fonn oversaw the educational program for both of these highly successful World Congresses.

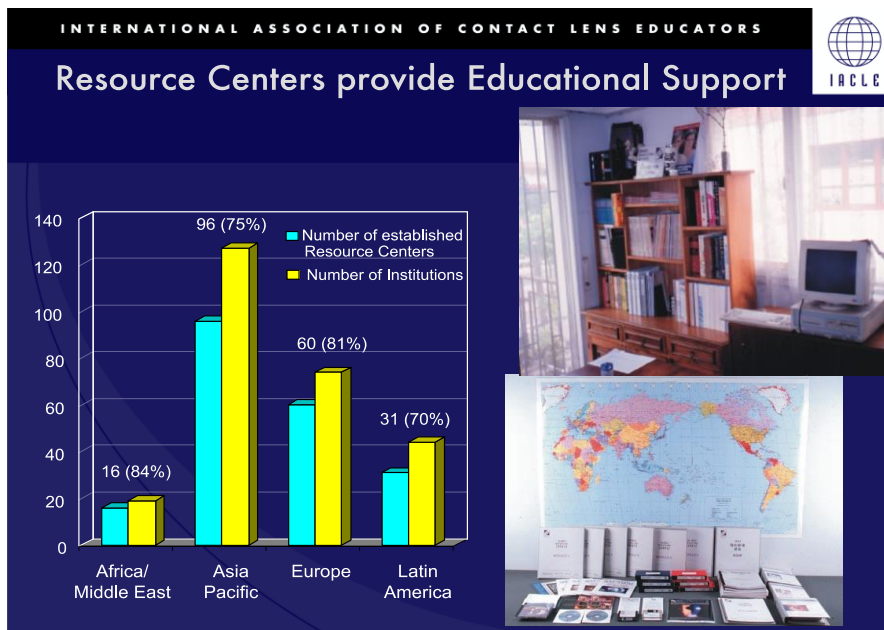


**Figure 10. Report on the 2nd World Congress on Contact Lens Education**

The year 2000 was momentous for another reason. Dr Deborah Sweeney became President of IACLE after serving as Secretary of the organization from 1992 and Dr Holden was elected as the Secretary.

## Resource Centers

As described earlier, the slide exchange through IACLE started after the first meeting in Monte Carlo. Over the years IACLE then developed a comprehensive collection of slides and videos on contact lenses and related subjects (some commissioned by IACLE) which continually expanded as new members contributed and the industry affiliates freely provided their materials. The slides and videos were provided to members at low cost or, where necessary, free of charge. When IACLE started collecting textbooks through donations from individuals, as well as from university libraries who had duplicate copies and from companies who had bought large amounts of certain texts and donated them to IACLE, the concept of Resource Centers arose.



**Figure 11. IACLE Resource Centers by region in 2002**

The principle was established that IACLE

would provide these resource materials to a teaching institution through the IACLE member so as to establish a Resource Center within dedicated space and prominently identified for promotional reasons so that other IACLE members and students of that institution would have access. The data shown in Figure 11 are from an analysis of a survey conducted by IACLE in 2001/2. This was a work-in-progress.

Not strictly part of the Resource Center, but the journal and textbook distribution was a program initiated by Pamela Capaldi and these were to be added to the Resource Center. The textbooks were delivered at low cost or free of charge for educators and students in developing countries where these books were prohibitively expensive. Similarly, many teaching institutions were unable to afford subscriptions to contact lens and related journals. IACLE offered free subscriptions to the institutions of members to *Contact Lens Spectrum*, *International Contact Lens Clinic*, *Journal of the American Optometric Association*, *Journal of the British Contact Lens Association* and *Optometric Education*. Unfortunately, these were all English language journals. Some institutions had students or educators who would translate specific articles into their home language that would be placed in the Resource Center.

### Educator Fellowship Program (EFP)

This program was designed to sponsor members to undertake training at other institutions for periods of weeks to months [6]. The intention was primarily to support educators from less developed institutions who had limited educational exposure to attend individualized programs at higher level institutions. The EFP also enabled experienced educators from higher level institutions to travel to developing countries to teach and instruct teachers at those institutions. Figure 12 shows an analysis of the number of Fellowships up to the year 2000.

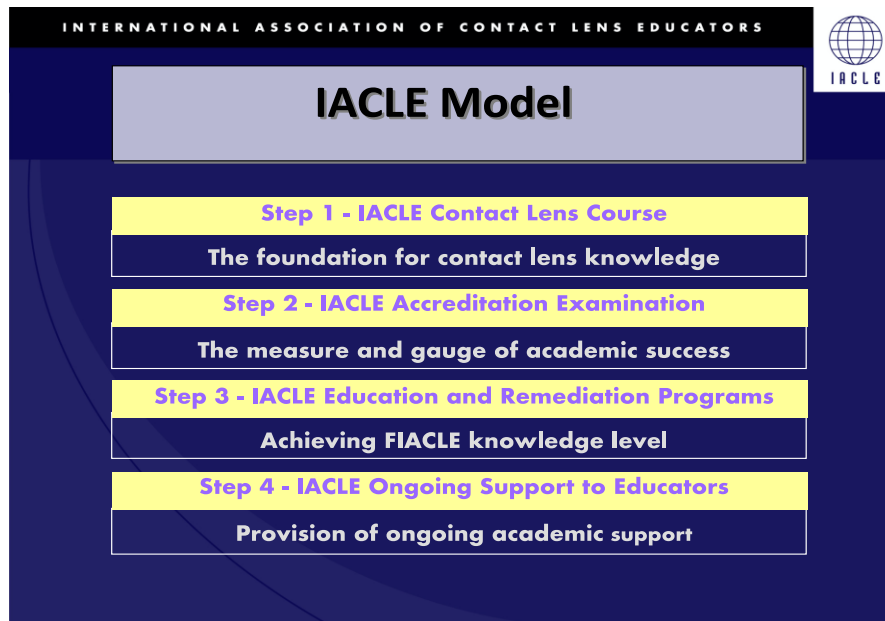


**Figure 12. IACLE Educator Fellowships by 2000**



## Standardizing and raising the standard of contact lens education

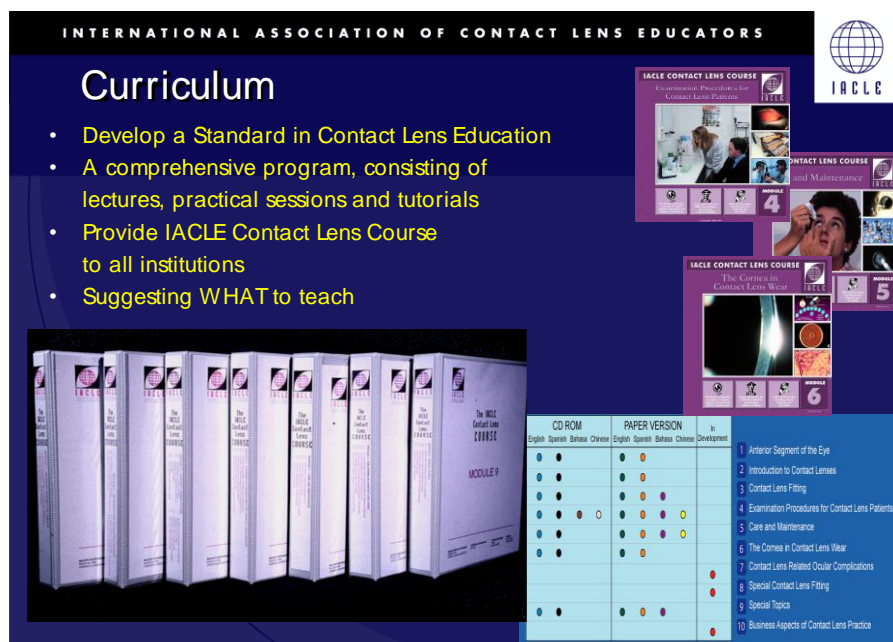
The IACLE Model was designed to standardize global contact lens education. Figure 13 outlines this four-step mechanism that IACLE employed for raising the standard of education worldwide. Each of these steps in the IACLE Model is described:



**Figure 13. The IACLE four-step model for contact lens education**

### 1. THE IACLE CONTACT LENS COURSE OR CURRICULUM

Although Sylvie Sulaiman started this mammoth project (Figure 14) and was ably assisted by Meredith Reyes who collected slides from many educators, Lewis Williams took charge and, as described, it occupied most of his time. Fonn, steered this project to completion serving as Editor-in-Chief reviewing all the material. The original objective was to produce a full course of lectures, practical exercises and tutorials that would have different levels to suit the sophistication or experience of the institution/members. Because of the complexity of developing a three-tier course, that idea was soon abandoned in favour of producing a course at the highest standard possible and then educators could pick and choose what they wanted to incorporate into their teaching. The original 10-module set was completed in paper form and 35mm slides of all the images were provided. Eventually CD- ROMs that contained all the images and videos were provided with the paper modules to members. Later still, a DVD containing all 10 modules was released.



**Figure 14. The IACLE Contact Lens Course or Curriculum**

The pricing for members was originally based on the PPP structure. The price per module was set at \$100 for a Group 5 member and the cost for the other four groups was subsidized by IACLE. Whatever materials were sourced (lectures, slides, etc) were used by Lewis and converted to IACLE style, content and format. Many of the lectures and practicals were written from scratch by Lewis and edited by Fonn. The curriculum was translated from English into three core languages: Chinese (Modern Standard Mandarin), Latin American Spanish, and Bahasa Indonesia. However, efforts by motivated individuals in other countries have unofficially translated some or all the modules into their local languages for local consumption. A cooperative effort by several institutions in South Korea resulted in a Korean version, a traditional Chinese version was produced by FIACLE Dr Richard Wu in Taiwan, and various modules in French, German, and Russian have been created by individuals for their own teaching endeavours or for sharing within their country

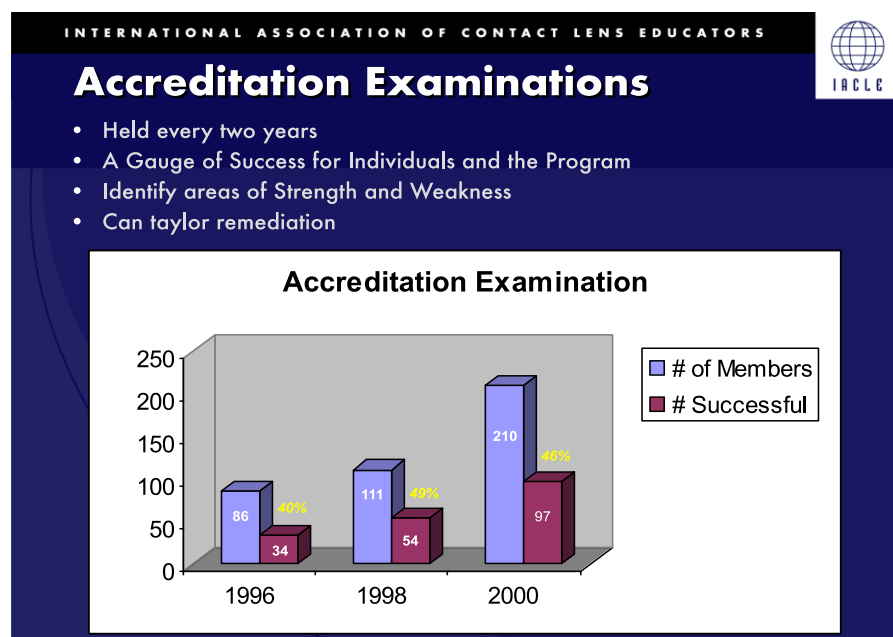
## **2. IACLE ACCREDITATION EXAMINATION**

During 1993 Holden, Sulaiman and Fonn went to the office of the National Board of Examiners in Optometry (NBEO) in Bethesda, Maryland, USA and met with the Director, Dr Norman Wallace, and Dr Leon Gross who was the Director of Psychometrics and Research at the NBEO. The IACLE Executive Board had decided at that time to establish an accreditation system for its members and that would necessitate an examination procedure. The NBEO had vast experience in conducting national examinations of optometry students in the US and used validated multiple-choice question (MCQ), examination techniques. They very kindly offered to assist IACLE in developing a MCQ exam with Dr Gross as the advisor.

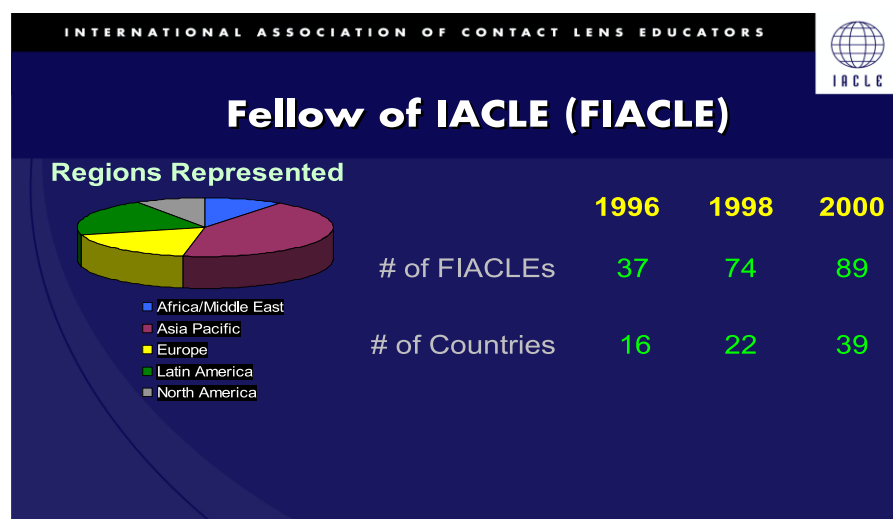
The motivation for establishing FIACLE Accreditation was to provide certification for members at institutions in developing countries with status and to 'enable educators to measure their

progress against internationally accepted standards of contact lens knowledge and skills'. Sylvie Sulaiman was charged with developing 'our own' FIACLE exam by sourcing MCQs from various optometry schools and adapting them to match our curriculum. Lewis Williams also worked on this project some time later.

The exam was to provide an assessment of members' knowledge and to provide feedback of their strengths and identification of areas for further education. The first examination took place in 19956 and was administered in 28 cities (20 countries). A total of 87 members and associate members sat for the exam. On passing the examination, members were eligible to apply for FIACLE status. Figures 15 and 16 show candidate performance and numbers of FIACLES for the first three administrations of the exam. Figure 17 shows three of the first FIACLES receiving their certificates.



**Figure 15. Accreditation Exam performance by number of members who attempted the exam 1996-2000**



**Figure 16. Number of FIACLES 1996-2000**

Following the Accreditation Exam for members, IACLE developed a Student Trial Exam using the same format. This was designed to test senior students (on a voluntary basis) at any teaching institution of an IACLE member. The purpose of the exam, besides being a determinant of the students' knowledge, was to gauge the level of instruction and student experience of at the institution.



**Figure 17. Three of the first FIACLEs (left to right): Julio Torres and Alberto Mila from Mexico, and LA Coordinator Percy Lazon de la Jara, with Brien Holden, Sonja Cronje, Dwight Akerman and Jan Jurkus**

### **3. EDUCATION AND REMEDIATION – DISTANCE LEARNING PROGRAM (DLP)**

This program was originally developed for both preparation towards writing the IACLE Accreditation Exam and for remediation following the exam if the candidate was unsuccessful. This was a tailored program that was structured for the member to complete assignments. Sonja Cronje effectively developed and directed this program. Between 1994 and 2000, approximately 77 members participated in the DLP.

### **4. IACLE ONGOING SUPPORT TO EDUCATORS**

The final step in the IACLE Model was the provision of ongoing academic support. The resources and programs provided by IACLE were supplemented by the creation of a global network of educators that – with the help of IACLE's Board and staff – would share a common goal: to raise the standard of contact lens education throughout the world.

In little more than 20 years, IACLE had developed from its early days at European meetings to be an organization with a global structure and industry investment, with members in more than 60 countries and its own World Congress. The new millennium would find IACLE well placed to build on these significant achievements and extend its reach still further.



## Acknowledgements

Professor Deborah Sweeney and Dr Lewis Williams for their contributions to this article.

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