Ladies and gentlemen:

I am honoured that you have invited me to deliver this address. You are very kind, as I know there are many here who know more than I do about contemporary distance and open education. In one way or another, you, in Australia, have gained insight, knowledge and experience in developing partnerships with on and off shore colleagues. And, over the last ten years, Australians have also gained tremendous skill in being entrepreneurial with the delivery of knowledge products all over the world. Therefore, I will refrain from tiring you with details that you already know. Instead, I will share with you, a few specific challenges that confront educational planners, policy makers and practitioners as they aspire to move away from high cost, elite, institution-centred provision to where the focus is very much student-centred, affordable and mass in nature, in a global context. In doing so, one invariably must consider the practice of distance education as an important option in any attempt at coupling mass education and low cost (this may or may not be so, but it is the perception) in most parts of the developing world.

2. Driven by global issues such as trade, investment, population growth, environment, good governance, human rights, cultural preservation, economics and technology, educational systems are in transition today; their emerging opportunities are enormous as are the threats to them. The opportunities are driven by technology, demand, globalisation and universal interdependency while the threats appear in the form of competition, narrow linguistic and political nationalism. In the time allocated to me by the convenors of this forum, I will attempt to describe from a development point of view, especially in the context of the
Commonwealth, the impact of these issues on educational provisions and their delivery. I will do this in three parts:

(i) In **Part 1**, I would like to review the global situation in terms of the educational challenges confronting humankind as it faces a population of some ten billion people by the middle of the next century;

(ii) In **Part 2**, I would like to describe where nations are in terms of using distance, resource-based or technology-driven education; and

(iii) In **Part 3**, I wish to highlight a few challenges that these nations, as well as others, may have to overcome in order to realise the many opportunities that technology and our experience of distance education can provide, as we move away from a narrow to a broader provision of education, especially through collaborative and partnership arrangements.

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**PART 1: A Question of Numbers**

3. Almost every projection that has been made so far seems to confirm the fears of Ehrlich and others that the population of the world will continue to expand over the next ten to fifteen years at an annual average rate of about 1.6%; in 1993 the world population was at 5.5 billion; by the year 2000, it is expected to reach 6.2 billion and the year 2050 will see population figures around the 10 billion mark. Some 35% of the world population inhabit the 54 countries of the Commonwealth of which four have the unique distinction of being among the nine most populous countries of the developing world (Table 1).

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<tbody>
<tr>
<td><strong>World Total</strong></td>
<td>5,295,300</td>
<td>5,759,276</td>
<td>6,288,254</td>
<td>6,688,159</td>
<td>7,149,499</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td>1.7%</td>
<td>1.6%</td>
<td>1.4%</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td><strong>More Developed Regions</strong></td>
<td>1,211,138</td>
<td>1,244,176</td>
<td>1,277,963</td>
<td>1,310,427</td>
<td>1,340,532</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td><strong>Less Developed Regions</strong></td>
<td>4,084,162</td>
<td>4,515,100</td>
<td>4,950,291</td>
<td>5,377,732</td>
<td>5,808,967</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td>2.0%</td>
<td>1.9%</td>
<td>1.7%</td>
<td>1.6%</td>
<td></td>
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</table>
CAGR: Compound Annual Growth Rate (for previous five-year period).


4. The growth, however, will not be even. Highest growth rates will be encountered in the poorest of countries, while in the rich and industrialised countries it will remain stable and may even show a minus growth. By the end of the century, according to UNESCO, the share of the developing countries in the population pool will be around 95%. There is also another twist to these statistics which has an impact on education and this is the structure of the population itself. The richer but slower growth countries are also those that are ageing - in these countries, the proportion of the over 65 years of age are increasing, going up to about 19% by the first quarter of the next century, while in the developing parts of the world the numbers of the young (those below 15) will explode (anything up to 1.2 billion by the early part of the century, (Table 2 and Fig. 1)). It is the poorer countries with larger numbers to be educated that have the least provision for education both qualitatively and quantitatively; a short supply of teachers, books, library and laboratory facilities and many other necessary infrastructures needed for good education.

Table 2: Projected Changes in the 15-24 Year Old Population (numbers in millions)

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<tbody>
<tr>
<td><strong>World Total</strong></td>
<td>1,014,940</td>
<td>1,031,809</td>
<td>1,070,638</td>
<td>1,159.319</td>
<td>1,240,839</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td></td>
<td>0.3%</td>
<td>0.7%</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>More Developed Regions</strong></td>
<td>180,760</td>
<td>177,252</td>
<td>175,345</td>
<td>175,800</td>
<td>174,967</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td></td>
<td>-0.4%</td>
<td>-0.2%</td>
<td>0.1%</td>
<td>-0.1%</td>
</tr>
<tr>
<td><strong>Less Developed Regions</strong></td>
<td>834,179</td>
<td>854,566</td>
<td>895,293</td>
<td>983,520</td>
<td>1,065,872</td>
</tr>
<tr>
<td><strong>CAGR</strong></td>
<td></td>
<td>0.5%</td>
<td>0.9%</td>
<td>1.9%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
CAGR: Compound Annual Growth Rate (for previous five-year period).


Fig. 1: The Evolution of the Age-Structure of the World's Population, 1980-2010 (percentages)


5. Even as we approach the 21st century, access to all levels of education in the poorer nations of the world continues to be appalling. Roughly, 960 million or about one-fifth of the world's population is still illiterate; a further 900 million (another fifth) can read and write but are, for all intents and purposes, functionally illiterate; a further 700 million may have at most, a mid-secondary level education, thus making it difficult for them to aspire for anything more than low-skilled jobs and wages. Approximately two-thirds of these populations are found among the 54 nations of the Commonwealth and even more depressing, is the fact that up to two-thirds of these groups are made up of girls and women.

6. While the poorer countries face the challenge of illiteracy, under-education, under-supply of education and quality of education, on the other end of the scale the challenges of the richer nations are equally daunting. Their (Australia, New Zealand, the United Kingdom and Canada) major (educational) concerns are centred around unemployment of the young, under-employment, the long-term unemployed, functional illiteracy, new migrants, isolated and marginalised communities and provisions for the chronologically old but mentally alert parts of their population.

7. There is yet another aspect of the demographic picture that needs to be taken into account as we review the educational situation. This is the level of educational attainment of the world's populations. Whilst we bemoan the fact that illiteracy and semi-literacy are on the increase, it must also be recognised that over the last quarter of the century, remarkable progress has been achieved in educational provisions worldwide. Participation rates at primary, secondary and tertiary levels have increased, especially in the developing parts of the world. It is estimated that some one billion are currently in school (compared to about 300 million, 50 years ago), and it is predicted that a significant number of them will seek opportunities for further education (Table 3). Using present growth trends, it is possible that some 150 million more post-secondary places, in addition to the present 60 million, will have to be created in the
next 25 years or so to meet this new demand. The demand will come mostly from the developing parts of the world.

Table 3: Rates of Education Participants by Level (World Totals), 1970-1990

<table>
<thead>
<tr>
<th>First Level</th>
<th>Second Level</th>
<th>Third Level</th>
</tr>
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<tbody>
<tr>
<td>89%</td>
<td>99%</td>
<td>36%</td>
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8. The ‘demand’ picture is also confounded by the global recognition that education does not necessarily stop with an initial qualification but is a continuous lifelong activity. This means that educational providers must be able to not only provide basic education to 18-year olds but also make provision for the regular updating, extending, upgrading, supplementing and broadening the skills and knowledge that are needed for productive work places and participatory citizenship. Some 80% of today's workforce, about 2 billion people, can be expected to continue working well into the first quarter of the next century. Meeting the educational needs of such people will require us to question the paradigms of present practice of space and time sensitiveness, institution-centred curriculum and assessment systems. In North America and large parts of Europe, part-time learners now outnumber full-time learners, and their educational needs and expectations of measuring that outcome is beginning to appear in the political agenda of many governments.

9. Bill Gates, in his book *The Road Ahead*, said “We are all beginning another great journey. We aren't sure where this one will lead us either . . .”; he is one of many in our generation who has expressed this view. We are the first generation that know for sure that we do not know what the future will be. Frequent career changes are becoming a familiar phenomenon and with these changes come the need to learn new skills and acquire additional abilities. The rapid pace of technological changes has convinced nations and businesses of the need for flexibility in the quality of the labour force. This requires not only keeping abreast of technological changes but ahead of them. A recent UNESCO Report considers them as evolutionary skills that are tied in with knowledge and know-how. Educational institutions, therefore, can no longer contend themselves with training a labour force for stable industrial or even agricultural jobs, instead, they must train individuals to be innovative, capable of evolving and adapting to a rapidly changing world of work.
10. The direction that education will take as we near the end of this century will, therefore, be governed by a number of forces, but three may stand out to be critical. They are:

- **A diversity of participants** (or learners) in the activity: schooling will not be limited to those between five and 24. Education and training will be of potential interest to all individuals at all stages of their lives, i.e., from literacy courses to those wanting to enter the University of the Third Age;

- **A diversity of goals:** learners of choice will study for a variety of reasons and objectives, learners will make decisions on what they want, whether it is for skills enhancement or intellectual development; and

- **A diversity of contexts:** full-time study within time-tabled constraints of the classroom is accessible to a few; for the many who wish to study, learning will have to happen at a time and place of their choice.

11. It is in this global context of the increasing and diverse demand and supply that I wish to explore the application of distance education globally.

- **PART 2: From Distance to Virtual**

12. It is said that, globally, between 10 and 20% of those participating in post-secondary education do so through the distance mode; the Commonwealth may account for as much as 50% of this figure. Pushed by a desire to open up access on the one hand and pulled by the need to economise on the other, distance education has become a very important vehicle in almost all the populous countries of the Commonwealth, very often transcending both the formal and non-formal sectors. The shape of the practice, as well as the nomenclature used in describing it, is limited only by the enthusiasm and imagination of those practising it - flexible learning, multi-channel learning, off-campus programmes, external studies, correspondence education, radio and tele-education, and in keeping with the emergence of the cyberculture, terms like the virtual classrooms and lectures are beginning to appear wherever you can find a guru, a server and a computer. In one way or another, these institutions seem to address one, a few or almost all of the following demands from their communities:

- Balancing past inequalities to access;

- Offering a second chance;

- Mass education and training; and

- Educating rural and marginalised groups.

13. More than any other continent, the Commonwealth nations of sub-Saharan Africapresent the most glaring evidence of the gaps between those who are educationally well provided for and those who are not. *Except for South Africa, the Commonwealth nations of this continent are mostly low-income,*
agricultural and industrial economies. To cope with the challenges of the next century, whether it is conflict resolution, agricultural production or environmental management, better and more education are needed in every sector. In a 1996 Human Development Report, it was stated that roughly half the children who entered Grade 1 barely finished Grade 5 (a 50% wastage rate), and some 80 million boys and girls are still out of school; school life expectancy of a child is as low as 350 days, and at the tertiary level in the worst-off parts of the continent, there are less than 16 university places for every 100,000 head of population. Therefore, neither local resources nor international assistance will be able to meet the needs of and the demands for education, using conventional delivery methods alone. For most of sub-Saharan Africa, educational opportunities can only be satisfied by the use of mass distance education.

14. There is a long tradition of distance education in many of the African countries in almost every sector of education. UNISA (The University of South Africa) claims to be the largest and oldest of the dedicated distance teaching institutions in the world. Apart from UNISA, the Technical College of South Africa (TECHNISA) - pre-tertiary technical education - also provides technical and trade related distance education in the country. Further north, the Republic of Tanzania has an Open University, and Zimbabwe and Malawi are planning theirs. Mauritius recently set up its Open Learning Agency after many years of debate and discussion, thus bringing all of its distance education under a single umbrella. There are also numerous departments of external studies offering a variety of courses and programmes leading up to formal qualifications. A number of Non-Governmental Organisations, notably INADES Formation, has a pan-African character delivering non-formal education using distance education methods.

15. Distance education in Africa is very much at the basic level; print continues to be the main vehicle for delivery in the formal sector, and print and radio play important roles in the non-formal sector. Even at entry level, good practice in distance education requires trained academic and support staff, reasonably equipped study centre facilities, functioning postal and communication systems and political commitment at the highest level. There are a few pockets where all of these come together and systems work reasonably well but, by and large, inadequate human and physical infrastructure result in poor materials, and unsatisfactory distribution systems and inadequate student support result in massive dissatisfaction all around. Despite these difficulties, the need for distance education has persisted, and recent initiatives by governments and international agencies are making it more central to educational delivery on the continent. One such initiative involves the World Bank, which is attempting to pilot an African Virtual University on the basis of applying new and emerging information technologies to deliver tertiary level education on a user-paying basis. The details of this ambitious venture are just beginning to be published. It is proposed that the source of knowledge be a select group of North American and European universities delivering first level undergraduate science and mathematics courses using video conferencing facilities through a Geo-synchronous satellite provided by one of the big American corporations. As part of its contribution, the World Bank will pay for the basic infrastructure needed for the venture and cover the entire cost of its first year operations. It will be interesting to watch this development as it unfolds.

16. Australia has one of the world's most comprehensive educational systems with almost total participation at primary school level but gradually diminishing to between six and 10% at the post-secondary level. Those of us who have been following Australia's debate on the value of education, skills training, continuing and lifelong education and the economics of it all, know that the debate is far from
over. The application of high technology to education seems to have extended the scope of this debate even further. Despite the uncertainties of a few years ago, there is a major resurgence of interest in distance education once again. Australia has always presented the greatest diversity in the practise of distance education, with a great tradition of taking knowledge and skills to widespread and isolated communities. In recent years, Australians have also been among the most aggressive vendors of educational products within their vicinity as well as (almost) pan-globally. It is difficult to predict the direction of distance education in this country. There is no single award granting institution that is totally dedicated to delivering education at a distance; a multitude of technical and further education colleges, universities, professional associations (engineering, accounting, medicine) are all engaged in some kind of distance education programmes. Open Learning Australia, established some five years ago, acts as a publicist, promoter and broker of distance education courses of and for its members at the post-secondary level, however, it does not create its own credit granting courses. Given Australian's love of and for technology, one can anticipate a lot of activity in wanting to go 'virtual'. Some remarkable experimental efforts in the use and application of multimedia and other emerging communication technologies, which are underway, are worth tracking. Even as education goes virtual, the concern in this country is not about human capacity and talent (there are plenty); it is not even about fiscal resources (though there is some concern); it is more about a lack of co-operation and co-ordination among practitioners, fragmentation of efforts and provisions and unnecessary competition. These, one suspects, limit the of choice and flexibility for users of this provision, given that one primary reason in wanting to go virtual is to give the people a greater choice without, in anyway, denying the benefits such a choice engenders.

17. In the South Pacific, New Zealand shows some similarity to its bigger neighbour in the north, though the Correspondence School and the Open Polytechnic of New Zealand extend their services throughout the nation. In the university sector, a number of universities, including Massey at Palmerston, have a long tradition of delivering courses at a distance. The situation is totally different among the Pacific Islands Group of 13 countries, 60 cultures, made up of small populations totalling about 1.5 million and dependent on a small range of activity (plantation agriculture, tourism and external trade) to drive their economies. Educational needs, therefore, seem to be very much at the secondary and vocational levels. The University of the South Pacific has been the main provider of distance education for the past 25 years and still is. Most of the resources needed for education are aid-dependent and the concern here is the absence of adequate indigenous capacity to sustain the continuance of this programme should external aid cease.

18. Distance education is firmly established in the Caribbean. A few years ago, there was concern that chronic under-funding, bad practice and dubious status would impede the growth of distance education; the persistence, perseverance and success of a few projects seemed to have generated interest in and enthusiasm for distance education in this part of the world. Notwithstanding these successes, the challenges still remain, as generally there are many initiatives with all the best of intentions, but because of poor funding and lack of trained talent, end up by delivering poor quality education.

19. The countries of Commonwealth Asia fall into three socio-economic groups. There is India, which is autarkic, large, self sufficient in agriculture, has a large manufacturing base and sufficient personnel in science and technology to comfortably participate in the information age. However, the country is also confronted with eradicating illiteracy, improving the quality of its primary and secondary education and
changing the culture of its higher education sector. The second group of countries, made up of Sri Lanka, Pakistan and Bangladesh, fall into the low- to middle-income industrial countries, and as they prepare to move even further up the economic ladder through participation in high technology manufacture, improvements in secondary school and post-secondary vocational education are imperative.

The third group of countries, made up of Singapore, Malaysia and Brunei, enjoy high incomes and at the same time, in the case of the first two, have made successful inroads into high technology manufacture and export. These countries have excellent educational systems at the school and university levels. As they become more and more integrated with the knowledge economy, their challenge will be to keep their work force upgraded and reskilled to be globally competitive. In a curious sort of way, all three groups need to look at non-traditional ways of delivering education to meet their needs. Not surprisingly, the continent (India, Pakistan and Bangladesh) is home to the biggest and most complex distance teaching systems in the world. Even in those states universities (Singapore and Malaysia) without open, provisions for delivering formal studies outside campus walls are available. Challenges to Asian institutions include addressing the needs of some 659 million illiterates, about 100 million out-of-school children and millions of aspirants, in isolated and marginalised communities, for post-secondary education; issues of quality, use of appropriate technology and funding are also beginning to attract attention at both the institutional and governmental levels. Of great interest are the Indira Gandhi National Open University and the National Open School, which are providing the leadership in the application of newer technologies for educational delivery. One hopes that this application will go beyond delivery.

20. In non-Commonwealth Asia, dedicated distance teaching institutions are found in China, Taiwan, Japan, Korea, Indonesia, Thailand, Vietnam and, very recently, the Philippines. Many colleagues here in Australia have much knowledge of the institutions located in these countries.

21. Jenkins, in a recent report, stated that some 50% of all universities in the UK and a significant number in Western Europe are engaged in some form of distance education. The nature and quality of some of these ventures will need some scrutiny, but it is commendable that, despite the questions of quality, mass higher education is becoming a reality in the UK. Work at the Open University's Multi-Media Institute, British Telecom among others, is creating interest in the use of the newer interactive technologies but, at the same time, a whole range of other questions from curriculum, assessment, copyright, fees, learner autonomy and choices are also being raised.

22. In North America, provision for all sectors of education is large. Participation in pre-tertiary education is universal, and some 50% of school leavers can expect to find a place at the tertiary level. Despite this, most North American states also have provisions for self-learning. Recent years have witnessed some ruthless trimming of educational budgets by governments confronted with massive deficits. This, along with concerns of ageing populations and shifts in the economy seem to stimulate interest in the delivery of education by non-traditional mechanisms. Given the continent's active telecommunication industry, technological innovations and long experience in delivering education to remote parts of their vast land, it is engaged in a variety of discussions on the advantages and disadvantages of telecommunication-driven education. From Prince Edward Island in the east to British Columbia in the west and from Ontario in the north to Florida in the south, political and academic interests in the virtual classroom are increasing, not only from access and economic points of view, but also from a pedagogical one. Provinces such as New Brunswick, Alberta and Ontario are actively pursuing opportunities to develop virtual classrooms and
campuses. States such as California and a few other western ones have set up virtual campuses. The continent's telecommunications infrastructure has the capacity to carry the interactive academic content; the ball seems to be firmly in the academic court to provide a response.

23. I would like to conclude this part of the presentation with a short statement on dual mode institutions. It would not be incorrect to say that long before the arrival of the dedicated distance education institutions, many colleges and universities across the world have been providing access to off-campus learners; many still do, especially in India, Malaysia, Canada, Australia, the USA and, increasingly, the UK. In India, there are more students learning at a distance through conventional rather than open universities; in Malaysia, all public-funded universities are being encouraged to become dual mode. With the growing demand for education, the opportunity to develop a new source of income, the increasing versatility of the newer technologies and the desire to demonstrate efficiencies, it is likely that during the next few years, a large part of the tertiary sector will be engaged in delivering instruction to non-campus-based students. The questions to ask:

- Is there an ability to construct learning materials that are interactive, learner-centred and have the capacity to use the enormous information contained in the data banks?
- Are enough provisions being made for learner support?
- What provisions are being made for equity and access for all aspirants desirous of studying through such systems?
- Is the Institution's administrative machinery capable of supporting the remote learner?

PART 3: Emerging Issues and Challenges

24. In a report written for the OECD, my friend Bill Renwick had this comment to make: "... The quality of learning and teaching and how to improve it, and how to make it available to a larger, more diverse student population is thus an essential part of the policy agenda for face to face as well as distance teaching institutions. One of the questions being asked is how far excellent face to face teaching and excellent distance learning derive from the same pedagogical principles even though they might employ them differently. Another question is how far excellent teaching and learning in both modes can be supported, enhanced and made more effective (in both the educational and economic sense) through the judicious use of information and communication technology." The future for those having a vested interest in the subject of education in the Commonwealth boils down to four fundamental things. They are the learners, the curriculum, the technology and the skills (both pedagogical and administrative) to manage this change.

25. The New Learner requiring the services of educational institutions will be different from the one we are now serving. In terms of prior knowledge and learning skills, we are going to be confronted, on the one hand, by individuals who will be comfortable and competent with using the tools of the knowledge century and, on the other hand, with people who will need basic literacy and numeracy training. It will be
a mistake to presume that these two groups will fall neatly into the north-south, rich-poor or developed-developing nations dichotomy. Every community will have different users, and educational providers must prepare themselves to provide access to both groups. Technology, rather than being an impediment, will be an asset in meeting this challenge. In many cases, though not all, the majority of new learners will be learners of choice who will expect to pay for the service and, in return, demand that the service be provided efficiently, effectively and skilfully; in this, they will have the support of their political representatives and governments. The new learner will also expect to be mobile and to be a global worker and citizen, and this will require that he/she have the skills to work in multicultural teams. Institutions of learning will be expected to provide them with these skills, while governments will be required to establish the relevant communications infrastructure needed for such ventures.

26. Providing skills for the new learner will require a curriculum that recognises globalisation and universal interdependency in an information age, thus requiring people to understand themselves through a better understanding of the world. I believe that these social and professional skills must become the core universal objectives which curricula must incorporate. In the recently published Delors Report, the UNESCO Commissioners called for four pillars of education that would form the basic framework of a global curriculum. They are:

- **Learning to know**, by having a broad overview of things and the skills to work in depth on selected fields; learning to learn and thereby benefit from the opportunities to learn throughout life;
- **Learning to do**, by acquiring vocational skills and the competencies to work in different situations and in teams;
- **Learning to live together**, and appreciating other cultures and people, respecting pluralism, peace and managing conflict; and
- **Learning to be**, so as to better develop one's own personality, acting with autonomy, judgement and personal responsibility.

27. Providing learning to diverse groups of individuals who are separated by space, time, prior learning skills and new training requirements will need an infrastructure that is global in reach, interactive in nature and affordable in cost. Institutions preparing to deliver education in this climate will begin to make greater use of technology in their teaching and learning, than today. Though it is unlikely that access to computing and communications technologies will be within reach of ALL those aspiring for an education during the remaining five years of this century, one can only be optimistic in one's belief that as we progress into the 21st century, accessibility will become more universal than now (Fig. 2). The technology industry has a history of making the software friendlier, hardware cheaper and operations inexpensive at every stage of its development. There is no reason to doubt that this trend will not continue (Fig. 3).

Fig. 2: Computers for 100 People in Selected Countries, 1995

*Source: The Economist, September 28th - October 4th 1996.*
28. However, to make this happen, national governments may have to build infrastructures to support such teaching and learning environments. These infrastructures should have, among other items, the following:

- That all those who deliver content to distant learners must use teaching methods that are resource based and require the learners to take responsibility for their learning;
- That teachers are expected to use the technologies of electronic networks, CD-ROM's, telephones, computers and a range of emerging multimedia tools as part of their professional skills;
- That institutions must provide all teaching staff with configured work stations located in their offices and linked to libraries, knowledge bases, media centres, colleagues and students;
- That students must be mature independent learners, need to have access to technology and must be technology literate;
- That students have the capacity to pay for part of their learning cost;
- That the management of institutions reconfigure institutional resources and invest in the production of knowledge products and pathways, to deliver the products; and
- That management prepares itself to cope with a diverse make-up of students, their goals and the context within which they learn.

29. The better-endowed parts of the global community will probably make this investment, but for others that certainty is less. Besides economic and infrastructure difficulties, developing nations may also have to overcome barriers such as:

- The design of communications and information technologies that are culture specific;
- The design of software packages that have an industrial country origin;
- A dearth of appropriate databases and content; and
- A lack of relevant human resources to make such systems work.

Collaboration

30. It is unlikely that in a learner-centred, flexible, technology-driven system of education where the student can be located anywhere on the globe, institutions can operate on their own and be immune to pressures and influences from their governments and, more importantly, clients. Partnerships, mergers,
consortiums, of one kind or another, may have to be considered for many reasons, but more notably, for reasons of:

- **Economy**: developing learning resources, establishing support centres for learners and creating the infrastructure for the delivery of courses are all up-front high capital costs that can be saved by shared use;

- **Changing enrolment patterns** is a common feature of flexible and modular learning; no institution committed to user centred curriculum can fulfil all learner demands; cross sharing of courses to meet programme aims and objectives better achieves student demands without causing enormous costs and presenting risks to individual institutions;

- **Funding patterns** that are uncertain and non-sustainable require alliances and strategies which reduce risks; and

- **Curriculum demands** that a variety of academic talents for short periods of time are better accomplished by sharing staff resources.

31. These actually provide strong incentives to build partnerships in a number of areas - from the very mundane such as developing new learning materials to the very exciting of sharing students, courses and credits. Partnerships, especially with institutions located in those parts of the world where the demand for learning will far exceed the ability to supply, will be particularly helpful as nations begin to accelerate the agenda for greater equality of opportunities. Other than in areas of joint research and perhaps staff development, successful partnerships resulting in long-term mutual benefits for all parties, especially in programmes and courses, have been few. Some examples of existing arrangements that come to mind include:

- **The Western Governors Virtual University (WGU)**: supported by the governors of 15 states and one territory, the university is being set up to expand post-secondary education for the widely dispersed residents of the 16 jurisdictions in the USA. It hopes to register its first students later this year and will deliver competency-based degree level courses via the Internet. Through partnership arrangements with both public and private providers of telecommunication and academic services, the university will arrange services such as information, course registration, library and bookshop services as well as facilitate access to course content, submission of assignments and term papers as well as the taking of examinations. The university does not have a faculty of its own. Those planning or invited to "teach" at the WGU are drawn from the wider community of academe, business, industry and public service. Even though the university is yet to deliver its first course, it has come under severe criticism from a section of the academic community. Cynics see it as a political gimmick and sceptics do not believe that "real" learning will take place in such an environment.

- **The African Virtual University (AVU)**: promoted and heavily subsidised by the World Bank, this arrangement is expected to bring state of the art knowledge (as is available in North America and Western Europe) to a number of campuses across Africa. Those who are funding the project as well as the institutions that are contracted to design and deliver the courses, speak
enthusiastically about this venture. Many in Africa question the wisdom of transporting in real time, at such enormous cost, undergraduate level science and mathematics courses from the western world to Africa.

- **The National Technological University (NTU):** which acts as a bridge between remote learners and participating institutions (faculty) in post-graduate engineering studies, arranges one-way transmission of lectures (in synchronous and more lately in asynchronous mode) with two or multiple ways of teacher - learner - learner through computer-based communication. The NTU facilitates the movement of credits and, at the same time, grants its own awards.

32. These are all agencies which facilitate learning by managing a learning environment (as the NTU does), acting as an electronic bridge of a kind, with marginal support to learners (Western Governors Virtual University) or funding and co-ordinating the process, development and delivery of learning (the African Virtual University). All three agencies, in their different ways, play extremely interesting roles and do, in fact, enable greater access for learning to take place. Their relationships with institutions that own the curriculum and credits, however, are non-intervention in the curriculum and assessment areas, mostly passive in academic decision-making, actively business-oriented and, with the exception of the African Virtual University, largely confined to national jurisdictions. Partnerships must be more than this; otherwise, as we have seen in recent years, they simply fall into business arrangements, where those who possess the knowledge products arrange to have distribution and service centres (for a fee) for the products with little or no transfer of the intellect, skill and technology.

33. The 21st century will witness, I am certain, the emergence of a number of pan-global open learning systems. They do not necessarily have to be funded by the public purse, but by entrepreneurs who will work in partnerships either with like-minded individuals or public-funded institutions which will not impede the movement of students, courses, learning materials, credits and staff. Like me, many of you in this audience may have knowledge of the discussions that are already taking place among the international business community and, perforce, ask yourselves that if these discussions can happen in the private domain, why should they not take place among public institutions? Could it be that private enterprise is more sensitive to partnership arrangements, that the profit motive enables it to make adjustments for parochial interests and its management is much more focused on outcomes rather than peripherals?

34. Among a series of studies commissioned by the Commonwealth Secretariat prior to the establishment of the Commonwealth of Learning in 1986, one prepared by Daniel et al. cited an analysis of a consortium that had failed. Lessons from these failures are worth noting as we enter into the next century:

- **Complimentarity:** Partnerships are based on mutual respect, trust and benefit. It is not exploitative of those within the partnership, though clearly, one's purpose in any partnership is to strengthen one's competitive position. Partnerships are not about donors and recipients, they are about alliances supporting and building strengths. Dissonance among members about perceived status and resource capacities is not helpful.
• **Mission clarity and articulation**: There is a need to establish very clearly, the purpose of the mission and to articulate it sensitively. A clear sense of direction is important, vaguely cobbled afterthoughts for partnering welcome disaster and frustration.

• **Institutional commitment**: Partnerships involving curriculum, materials, learning assessment and credentialling require unequivocal institutional commitment, support and approval. It is NOT an arrangement between two individuals - it involves entire communities and, therefore, requires ownership of these communities.

• **Government and community support**: International partnerships must have their governments' support at both the policy and practical levels when it concerns the delivery of educational products.

• **Organisational structure** to support partnership activity needs to be put in place. Education delivered across national jurisdictions relies on faith, trust and the belief that those who are delivering the education will also take the responsibility to support the learning environment just as they would when such delivery takes place within campus walls in their immediate environment.

• **Leadership**: Like any other venture, the quality of the partnership is only as good as the time and interest that leaders of partnering institutions bring into it. Venturing into international academic partnerships because it looks good to market presidentships locally, do not make good collegiality. Leaders with a vision of global developments, the desire to assist in reducing unhealthy disparities among people and nations and willing to work towards these goals are needed by the international community.

35. In the concluding paragraph of their book on *Collaboration in Distance Education* stated that the "*distance education institution* of the year 2000 is likely to be as much an educational broker as a credit granting institution. It may develop niche areas of academic expertise, which it will guard jealously in its immediate sphere of influence - but which may be amenable to partnerships with institutions that offer no threat to its status or territory". Between 1993 and 1998, the world has already changed much. Today, we cannot limit the view that they had expressed to just distance education institutions; in Western Europe and North America, *almost all tertiary institutions* will fall into the same pond - they are, in one form or another, delivering or planning to deliver knowledge to students outside of campus walls. While many of them are seeking collaborators, they are still mostly self-centred in the way arrangements are negotiated. Partnerships of the 21st century cannot be about territorial preservation (cyberspace does not recognise this), it will be about student volume and economics, learner choice and autonomies, mobility of jobs and people, explosion of knowledge and technology and interdependency and universalisation.

Footnotes:


