

Rethinking Planning for Open Learning

by Gajaraj Dhanarajan



COMMONWEALTH *of* LEARNING

**Commonwealth Educational
Media Centre for Asia**

Rethinking Planning for Open Learning

INTRODUCTION

This meeting is about Planning Open Learning generally, but more specifically it is about planning Open Universities which, as a habit, use methods of distance education to deliver learning. Speaking selfishly it could not have come at a better time for those of us in Penang, who are struggling very hard over many issues relating to Open Learning that requires consideration, as we work on establishing a new Open University on this island, to serve Malaysians.

Looking around we cannot help but recognize that the world in which Open Distance Learning operates is being redefined based on a number of factors. Major technological breakthroughs as well as social developments, many of which have occurred over the last three decades, are major drivers of the changing environment. but, others such as increased demand for learning, trade in educational services, globalization, economic liberalism have all been cited by one or another expert, as contributing to that redefinition.

We were witnessing the tail end of the Industrial Age and preparing to welcome the Computer Age when the first Open University was being established, in 1971. Since then, the succeeding decade has seen the Computer age evolving into the Communications Age at electronic speed. Walter Perry who was planning the establishment of that first Open

University, in the 70's, was clear that for his new type of university, educational broadcasting was an important tool to reach the masses. Some of you may be familiar with the central role that television and radio played not only in the promotion of the UK Open University but also in establishing it as a model for other open universities. Of course Walter was also mindful of the convergence of two other major postwar educational trends both of which contributed to the vision, purpose, shape and size of the UK Open University.

These are:

- ❖ Developments in the provision for adult education; and
- ❖ The political objective of promoting the spread of egalitarianism in education (Perry, 1976)¹.

Almost all of the major Open Universities that were established, following the success of the OUUK, from the mid seventies to the late eighties shaped their form [not necessarily their substance] very similar to that of the UKOU. They collectively got branded together by Daniel² in the mid nineties as the Mega Universities of the world. These are universities that had more than 100,000 students and applied distance teaching as their primary delivery mode. These also relied heavily on technology to conduct their business.

TECHNOLOGY – THE CHANGE AGENT

To day, when planning open learning, our considerations have gone far beyond, what now appears to be, the less complex world that Walter Perry had to deal with. The Internet and the World Wide Web (WWW) have made the process of obtaining an education without regard to time or location easier for the student. At the same time, these technologies have also presented more challenges for the providers of distance education; from Student Information Systems [SIS] to Learning Management Systems [LMS] planners have to exercise judgment and commit investments in the construction of their

Major technological breakthroughs as well as social developments, many of which have occurred over the last three decades, are major drivers of the changing environment.

systems. For many of my generation this is a new ball game.

Even as recent as ten years ago the choice of technologies for purposes of delivering education was somewhat limited, partly because they were expensive, analogue stand-alone technologies with limited versatility; requiring many skilled technicians to create and deliver the product. Radio and television are prime examples of the demand that these technologies made on educational systems. Those that did not fall into this category such as overhead projectors, slide projectors, etc., consequently, had limited reach. The picture now is completely different. Limitation to technology application in education is no longer the versatility, convenience, cost and potential of the technology but rather the limitation of our imagination in the way they can be applied. Through integration, convergence, miniaturization and intelligence the technologies have become friendly. The question is no longer whether technologies are useful in the teaching and learning environment but which technologies are best suited for a particular purpose.

Digitization of the many information and communication technologies has made it possible to design, develop, deliver, manage and assess the learning and training process in many new ways. The new digital technologies are not single technologies but rather combinations of hardware and software, media and delivery systems. They are rapidly evolving and converging as seen in PCs, laptops, notebooks and PADs; digital cameras that are both video and single "image"; local area networking; the Internet and the World Wide Web; CD-ROMs and DVDs; and application software such as word processors, spreadsheets, simulations, e-mail, digital libraries, computer-mediated conferencing, video conferencing and virtual reality. They also have a capacity to integrate with the older analogue technologies from print, through to audio and video, making it possible to retrieve information stored in older technologies as well as develop synergies between the old and the new. They also differ in several important aspects from the older technologies in areas such as their integration of multimedia, convergence of communication and information technologies, interactivity, flexibility of use and connectivity. Understanding these differences will help in our appreciation of why the use of ICTs in education can be expected to grow.

In a book that he edited in 1984, Bates ³ commented that "developments in technology are bringing advantages to distance teaching and removing some of the disadvantages

Digitization of the many information and communication technologies has made it possible to design, develop, deliver, manage and assess the learning and training process in many new ways.

previously associated... through promises of lower costs, greater student control, more interaction and feedback as well as wider range of teaching functions and a higher quality of learning." We are witnessing these remarkable transformations taking place within the operating environment of global distance education in which the new technologies are playing a crucial role. Improvement in administrative efficiency, better student record management systems, improved course development protocols, a higher level of study centre support and student learning environments have all, in one way or another, benefited from the use of a variety of technologies.

The evolution of distance education that has been taking place primarily driven by environmental changes has been creating a paradigm shift in the way educators have begun to view teaching and learning. Administrators, faculty, staff, and students have begun to realize that in order to successfully implement ODL, they had to reassess their methods, means, structures and resources. It is in this context that I wish to exchange thoughts with you, even as we in Penang agonize on the choices we have to make and the routes we could /should take in planning a new Open University some 35 years after Walter Perry established his, at the mid - point of the first decade of this new century. For me seven factors, besides technology, come to mind as important in such a venture. These may not be the same ones that you would have experienced or listed; if that is the case, it will certainly be helpful to us here in Penang to hear from you. My list will include the following:

- ❖ Catchment,
- ❖ Curriculum,
- ❖ Learning Materials, copyright and intellectual property
- ❖ Finance
- ❖ Partnerships
- ❖ Marketing
- ❖ Quality

Catchments

Distance and open education should not and cannot be seen as a panacea to solve all of the educational deprivation of our nations; at the same time it would seem injudicious not to include it as an important part of a solution to bridge the gap between the demand for, and supply of, education. It is important to remember the pedigree of most distance education enterprises. The common aim over the years has been to spread enlightenment, knowledge and instruction to men and women who, usually for lack of money and the necessary formal qualifications, would otherwise be prevented from studying for higher educational awards. It is still the case in most developing countries in our part of the world.

Most initiatives in distance education during the last 30 years have sought to increase opportunities for undergraduate studies. However, recently much more attention is being given to the non-university sectors, both formal and non-formal, as arguments based on equity are reinforced by consideration of economic efficiency. For many of us it is hard to see how nations could respond to the demands for more education other than to build on the experience of open learning gained over the last decade in order to provide for the next.

There are more children in school than ever before, more young people in colleges and universities, the number of trained teachers has been on the increase and there are more trained academics staffing colleges and universities. But however laudable these gains are, they have not kept pace with population growth nor have they been sufficient to address the challenge of diversity, backlog of unmet demand and range of new clients. Many would admit that an educational crisis is in the making. The crisis is not limited to tertiary education only; it also includes within its shadow all sectors of education and training.

Many would admit that an educational crisis is in the making. The crisis is not limited to tertiary education only; it also includes within its shadow all sectors of education and training.

In a recent review of adult illiteracy, UNESCO⁴ reported that a full 23% of the world's adult population were totally blind to the written word; they were unable to write and were completely non-numerate. For all intents and purposes, they are destined to be non-participants in a world requiring knowledge as a prerequisite for participation in fundamental human activities and the increasing democratisation of political systems; Some 960 million individuals, fall into this category. In the post-secondary sector, the situation is even more complex. Not only is the supply needed for those who are continuing their education and training without a break between school and college, but also opportunities need to be found for those who wish to return to learning. One estimate recognizes that the current supply of post-secondary education of around 82 million places may need to be increased to about 150 million in the next 20 years and thereafter by between 8% and 11% annually⁵. Sadly, educational inequality will continue globally and it is stark among developing countries.

Therefore, as we move towards end of the first decade of the new millennium, the challenge facing our educational systems, is to find the ways and means to extend learning opportunities beyond the more than 960 million adults who are illiterate to others who are under educated, physically challenged, long term unemployed, out of work youth, refugees, recent immigrants, guest workers and others.

From basic education to professional development, the gap between needs and provisions, demand and supply, quantity and quality, and capability and capacity has been widening. The level of investment that will be required to bring education at the basic level to about one-fifth of humanity, beyond basic level to another fifth and lifelong learning opportunities to a third fifth is both daunting and clearly not reachable by 2015, which is being set as the next big target by forums such as UNESCO's Education for All (EFA). Just to keep up with basic needs alone will require more resources in the next ten years than all those used in the last ten. Not only have we to cope with a resource need, we also need to present education to those who need it in a meaningful and user-friendly basis. It is in this environment of continually increasing and rapidly changing demand and expectations of satisfactory supply that those responsible for establishing and operating universities generally and Open Universities particularly need to craft their plans. The nature of the catchment has not changed since the days of Walter Perry but the size has, by many times.

In planning, should we then take into account:

- ❖ the potential size of the catchment [say] at steady state for example do we start small and expand as the demand grows especially in the installation of technologies
- ❖ the context of educational services to be offered for example are the services limited to certain age groups or sectors of education; totally on line or is there a blend of teaching methods,
- ❖ the nature of the clients to be served such as working adults, home based young learners, women only ,
- ❖ the barriers to be breached to increase access such as technology access, prior learning requirements by legislation.

or should we simply work on the principle of one size fits all and create universities that serve a multiplicity of purposes and participants?

Curriculum

A University programme or course curriculum is part of a university paradigm; it is also a paradigm in itself. Curriculum design, transformation, development and delivery follow patterns that are as old as University's themselves. However in a world that is shrinking as it is globalizing university curriculum cannot limit its vision to the university paradigm alone, it has to respond to national as well as global needs. UNESCO⁶ some time ago suggested that the new globalization requires four pillars to form the basic framework of education; you may remember these pillars "*Learning to know, Learning to do, Learning to live together. and Learning to be*". I believe that these social changes brought about by globalization, must inevitably manifest themselves in changes of the curriculum of all universities, but especially those that deal with adult learners.

Clearly this call of curriculum reform is not a new one. In early 1990, the Royal Society⁷ of the Arts, in arguing a case for wider participation in better higher education, made a similar plea for courses and programmes to be:

- ❖ Rigorous, attractive and enabling, so as to attract and retain student interest in learning, rigorous in its demands of intellectual and skills challenges and enabling learners to know and to do;
- ❖ Provide appropriate balance of subject skills and knowledge, general conceptual skills and personnel

To be a lifelong learner, not only the skills of learning but also skills to assess what knowledge and skills one needs to acquire to be competitive in, and relevant to, one's living environment are needed.

transferable skills, to work together, to lead and to respect others and their views, and

- ❖ Give added value and fitness for purpose to each student or learning to be; and more recently, the OECD, through its reports on the educational challenges confronting its member states, seemed also to indicate the need for curricula reform which will result in learners acquiring the skills of:

- Communication, especially for working in a multicultural environment given the mobility of today's population for learners to appreciate the cultural differences of people outside their own communities and countries;
- Problem solving, which will require the ability to frame problems in the first place and then to apply information technologies to solve them;
- Working together in teams made up of people with different backgrounds, culture and skills; and
- Self learning: To be a lifelong learner, not only the skills of learning but also skills to assess what knowledge and skills one needs to acquire to be competitive in, and relevant to, one's living environment are needed.

Forces outside of campus walls may eventually force the powers within to re-examine their core curriculum to meet users needs rather than perpetuate the traditional practice and belief that academic autonomy and freedom do not allow a say for the consumer to demand what is relevant, good and desirable for him or her. Globalisation will mean similar demands from diverse locations (a good example of what could happen is the MBA programme which, whether delivered in New Delhi, Beijing or Sydney has features that are almost identical).

Therefore curricula planning must invariably consider:

- ❖ A global character in making learning relevant to a globally mobile adult workforce and its employment.
- ❖ Learning remediation enabling and empowering citizens to resume learning from wherever whenever they last experienced formal learning.
- ❖ Media streaming by carefully transforming curricula designs into learning objects by the selection of appropriate media and streaming it twenty four hours a day throughout the year
- ❖ Web enablement to exploit the full potential of the communication technologies.
- ❖ Synchronous and asynchronous interactivity with the learning materials, peers and mentors.

Finance and Tuition

The application, and level of cost, of new technologies is likely to lead to a search for new sources of funding. Where new technologies increase costs there is likely to be a tension between attempts to take advantage of their capacity to widen access and the search for ways of funding them: access may be possible at a price only the more privileged can pay. One consequence of adopting telematics may be to shift responsibility for funding from the teaching institution to the learner, or from a central institution to an individual school or college. Downloading materials electronically, rather than buying them commercially or receiving them through a ministry of education, shifts the location of costs and may in fact increase them. At the same time, may sometimes be possible to locate community funds by decentralising. These circumstance by necessity requires a re examination of the basis of tuition.

Students outside school, often politically powerless, are often asked to pay a higher proportion of the costs of their education than those in school... If online students are paying more, should they not also be receiving the same types of services as their on-campus peers?

The funding of out-of-school education has often been on a different basis from in-school education. Students outside school, often politically powerless, are often asked to pay a higher proportion of the costs of their education than those in school, sometimes in the expectation that they will be earning while studying. This sometimes means that those who receive education which has fewer infrastructural investments have to pay more than those in a campus. If online students are paying more, should they not also be receiving the same types of services as their on-campus peers?

Many public institutions rely on state funding to finance their ODL programs. Institutional funding models are widely used in public colleges and universities to distribute to individual departments funds given to the institution as a whole. In the simplest terms, funds are calculated by multiplying the workload (# of students) by the state approved funding rate. Some states have continued to use traditional funding models to finance e-learning. This approach requires states to identify how online students compare to on-campus students for matters of workload calculation. Special organizational funding for e-learning is also used, including consortia, centralized purchasing and the funding of telecommunications networks. In addition to the issue of workload or FTE calculation, states are grappling with other funding issues. Some legislation requires off-campus instruction to be treated as continuing education and be self-supporting, but continuing education units are not counted towards degrees for the student. Another central issue is the large upfront costs of e-learning.

Online programs require additional equipment, support services and course development and training money. Traditional funding formulas do not address these added costs. Will institutions be able to continue to charge state mandated tuition rate for online courses and stay competitive? Institutions often address the increased costs involved in e-learning by adding additional technology fees or raising the price per credit for online courses. In re looking at the financing of open learning in the new environment the following issues come to mind requiring attention:

- ❖ How are e-learning courses and programs financed?
- ❖ Who pays for the upfront costs in e-learning programs and courses?

- ❖ How are funds distributed to the sponsoring unit?
- ❖ How do states define the full-time equivalencies [FTE's] of online students?
- ❖ What do institutions charge for an online course? How do institutions set this price?
- ❖ What types of student fees are assessed for an online course?
- ❖ What types of services do online students pay for?
- ❖ Do institutions use a general tuition surcharge for online students?

Learning Materials, Copyright and Intellectual Property

At the heart of all learning in distance education are materials, specially designed to exploit the full potential of the available technological assets. These materials will normally include content in the form of texts, special "books of readings", specially developed study or learner guides, assignments and assessments pads and instructor or tutor guides. These resources along with appropriate learner support systems complete the educational or training environment. There are two ways by which institutions acquire these learning and teaching resources. The first is to design and develop them either by themselves or in partnership with like-minded collaborators. The second is to purchase, lease or acquire, through other arrangements, materials already developed and adapt them for their unique needs. The production of learning materials is among the most important, interesting and costly tasks a distance teaching institute undertakes. The quality of the learning environment is dependant on the soundness of both the content and instruction contained in the learning materials. New technologies like the WWW and the Internet are changing the ways courses are developed and delivered, while posing enormous legal issues that require addressing.

The need for defining a policy on intellectual property is increased due to the unique nature of online courses and programs. Traditionally, intellectual property policies at higher education institutions have focused on protecting inventions, textbooks, and software programs. Yet the ability to trade an online course or modular component of a course to another institution or entity brings new questions of ownership.

New technologies like the WWW and the Internet are changing the ways courses are developed and delivered, while posing enormous legal issues that require addressing. The need for defining a policy on intellectual property is increased due to the unique nature of online courses and programs.

Moreover, there are increasing numbers of online course collaborations. These joint efforts create another important need for a well-defined intellectual property policy. There are three different types of ownership arrangements that some North American institutions use in their intellectual property policies. Several policy issues arise, regardless of the model. These are:

- ❖ The institution owns the online course. Under this model, the faculty member who has authored the work relinquishes control of the course after its creation.
- ❖ The faculty member creates the course as a "work for hire" and the institution is the owner. In the works-for hire model, the faculty member may be given the right to use the course at other colleges yet the institution would still maintain control of the course.
- ❖ Faculty members are independent contractors. In this option, the faculty can be given exclusive or non-exclusive rights.

All of these present the following issues for our discussions:

- ❖ Should an institution make its own courses or should it acquire and adapt?
- ❖ If acquired who owns the adapted portions of the course
- ❖ Who owns the online courses?
- ❖ Who may reuse the online course?
- ❖ Who can revise the online course?

Quality Assurance

Quality Assurance in e-learning has been a paramount concern for institutions nationwide; while technological advances have led to the exponential rise in distance offerings, many institutions are launching new distance programs often without

the necessary experience to guide their success. Quality Assurance policies can help guide both new programs and serve as evaluation tools for current offerings. It is important to stress that these policies do not control the content of e-learning provisions. Rather, they aim to provide standards for elements that are unique to distance offerings, such as course design or online student services. Across the board, institutions agree that online course content should be as good as face-to-face content. A recent practice that is being adopted among institutions is called Outcomes-Based Assessment.

In this model, online classes are organized in clearly identified and demonstrable learning outcomes. These learning outcomes are used to assess student progress and can be applied to courses regardless of learning medium.

Should the planning process take into account QA essentials; if so what are the issues:

- ❖ How does one define quality in the new ODL environment?
- ❖ What constitutes a high-quality online program?
- ❖ How do institutions ensure that online learning is as good as classroom learning?
- ❖ What should accreditation organizations look for?
- ❖ How should student learning be measured?
- ❖ How is the quality of online courses and programs assessed?
- ❖ How is the structure of individual courses evaluated?
- ❖ What processes must be in place for the continuous improvement of online courses and programs?

Partnerships

It is unlikely that in a learner centred, flexible, technology driven

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.

system of education where the student can be located anywhere in the globe, institutions can operate on their own and be immune to the pressures and influences upon them 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: the development of learning resources, establishment of support centres for learners; infrastructure for the delivery of courses are all up-front high capital costs which 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 which are uncertain and non-sustainable requires alliances and strategies that reduce risks; and
- ❖ Curricula demands that require a large variety of academic talent for short periods of time is better accomplished by sharing staff resources.

All of these actually provide a strong incentive 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.

In any meaningful and intense partnerships between institutions of higher learning, especially across national jurisdictions in as far as teaching and learning are concerned, the sharing of curriculum is perhaps the most sensitive and potentially difficult part of the arrangement, and resolving this impediment will require both patience and determination partners unwilling to come together on matters of curriculum are not about globalising educational delivery, they are about self-serving interest, domination, superiority and control.

What then should be our guidelines for partnerships in this digital age? My list will include a dialogue on all of the following:

- ❖ Purpose and focus
- ❖ Shared values and philosophy
- ❖ Compatibilities
- ❖ Joint curriculum and course development
- ❖ Student/credit mobility's

Marketing

Recent years have witnessed the shift in tertiary education from being a service provided by the state to its citizens, to a commodity purchased by the state from a range of providers for its constituency, and then offered as an export service to clients from offshore. As documented in *The Business of Borderless Education* (Cunningham et al., 2000)⁸, the online learning economy is heating up. In their quest to maximize the revenue generated by their intellectual capital, universities want to respond to growing student expectations that courses will be available on the Web in a highly effective, efficient and maximally convenient way. Traditional universities are partnering with each other, with technology providers, and/or with publishers. Private for-profit online and mixed mode universities have successfully entered a once-exclusive market—more than accreditation; brand recognition is recognized as attracting enrolment. Today, a business strategy for online education is seen as vital to the economic viability of many universities. This has had a profound effect on most institutions world wide resulting in a number of behaviors such as

- ❖ Universities are now in competition with each other, both for inland and overseas students.
- ❖ Marketing for students has become a significant activity of almost all universities.
- ❖ Concepts which have their origin in the commercial world, such as 'market forces', 'customer service', 'customer focus', 'consumer friendliness', are gradually becoming accepted as indicators of the new environment in which universities operate.
- ❖ To 'meet the market', there is need for much greater flexibility in course design, course content, the method of delivery, and admission criteria.

In their quest to maximize the revenue generated by their intellectual capital, universities want to respond to growing student expectations that courses will be available on the Web in a highly effective, efficient and maximally convenient way.

This new environment is producing a number of changes. The changes include increased emphasis on making the administrative process more 'customer friendly', glamorizing pedagogical practices, endorsements of qualifications by businesses and industries ETC. Most universities are also devoting resources to establishing marketing departments and marketing activities, such as advertising and other promotions.

Marketing is expensive; it can be done either sensibly or crudely. There is a fine balance between selling the purpose of education and the product of education. Planning a marketing campaign must necessarily include:

- ❖ Ethics of marketing
- ❖ Vehicles for marketing
- ❖ Size of Budget
- ❖ Handling Competition

WRAPPING UP

Technology, whether it is print or multimedia, does not teach. These techniques simply enable the delivery of teaching from narrow to mass catchments. In doing so they shift the responsibility of learning away from the teacher to the learner. Even while we are entering the era where both multimedia and hypermedia are bringing together, under one umbrella, the essence of print, audio and video signals, computer-assisted instruction, conference and group learning, at the heart of the teaching and learning transaction will be institutions and teachers in them. The challenge for planners, from my point of view will be to create pedagogies of learning within which modes of delivery will contribute to effective learning.

Like the other technologies before, the new technologies do change things; sometimes these changes are simple and at other times, profound. As we consider the impact of these technologies on the planning of Open Universities, it is worth remembering what Neil Postman⁹, said about it all in his book: *The End of Education*, [Vintage Books, New York,] in 1996. These are:

- i. The advantages and disadvantages of new technologies are never distributed evenly among the population. This means every new technology benefits some and harms others.
- ii. Embedded in every technology there is a powerful idea, sometimes two or three powerful ideas. Like language itself, a technology predisposes us to favour and value certain perspectives and accomplishments and to subordinate others.
- iii. Every technology has a philosophy, which is given expression in how the technology makes people use their minds, in what it makes us do with our bodies, in how it codifies the world, in which of our senses it amplifies, in which of our emotional and intellectual tendencies it disregards.

- iv. A new technology usually makes war against an old technology. It competes with it for time, attention, money, prestige and a “worldview”.
- v. Technological change is not additive; it is ecological.
- vi. A new technology does not merely add something; it changes everything.
- vii. Because of the accessibility and speed of their information, different technologies have different political biases.

References

- ¹ Perry Walter [1976] *Open University: A personal account by the first Vice-Chancellor*. Milton Keynes, UK: The Open University Press
- ² Daniel, J [1996] *Multi media and Mega Universities*
- ³ A.W. Bates [1984] [ed]: *The Role of Technology in Distance Education*. Croom Helm, London.
- ⁴ UNESCO: <http://portal.unesco.org/education>
- ⁵ World Bank:
- ⁶ UNESCO [1999] *Learning: The Treasure Within*. A report by the Delors Commission
- ⁷ Meighan, R [2000] *Some Principles of Educational Reconstruction*. Royal Society of Arts [<http://www.21learn.org>]
- ⁸ Cunningham, S, Ryan Y. et al [2000]: *Business of Borderless Education*, DEETYA, Australia
- ⁹ Postman, N [1996]: *The End of Education*. Vintage Books, New York,

About the Author



GAJARAJ DHANARAJAN is Chief Executive Officer (CEO) and Vice-Chancellor designate of the Wawasan Open University College -Penang, Malaysia. Prior to this, from 1995-2004, he was president and chief executive officer (CEO) of The Commonwealth of Learning in Vancouver, Canada, with a mandate to support, enhance and promote open learning in the member states of the Commonwealth. From 1991 to 1995 he was director, the Open Learning Institute of Hong Kong (now the Open University of Hong Kong), which he helped to establish. Previously, he was the founding CEO of Disted College, Malaysia, 1987-1989. It was during his time as a lecturer in the University of Science Malaysia, 1970-1987, that he became increasingly involved in the development of open and distance learning at both regional and national levels. He has participated in establishing a number of distance education systems in Asia, Africa, and the Caribbean, working with numerous international development agencies and financial institutions. He has received many awards and honors for his contributions and innovations in education delivery, including the Order of Chivalry by the State of Penang, Malaysia. He holds a doctoral degree in biology from the University of Aston, Birmingham, UK. He is visiting professor at the Open University, United Kingdom; and advisor at the School of Professional and Continuing Education, University of Hong Kong. In 1994, he was conferred with an Order of Chivalry (which conveys the title of Dato') by the State of Penang, Malaysia.

Written by : **Gajaraj Dhanarajan**

Designed & Printed by : **Mensa Computers Pvt. Ltd., New Delhi**

Published by : **Dr. Usha Vyasulu Reddi**

for and on behalf of **Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi**

The opinions expressed in this document are those of the author and not necessarily that of the Publisher. All products mentioned in the document are the property of the respective Trademark holders. References to these products are only for illustrations, example and information. These do not mean endorsement in any way by CEMCA or COL.

In consonance with the mission of the Commonwealth of Learning, the Commonwealth Educational Media Centre for Asia promotes the meaningful, relevant, and appropriate use of information and communication technologies to serve the educational and training needs of Commonwealth member states of Asia.



COMMONWEALTH *of* LEARNING

**Commonwealth Educational
Media Centre for Asia**

C-5/4 Safdarjung Development Area, New Delhi 110016, INDIA
Tele. : +91-11-2653 7146 +91-11-2653 7148 Fax: +91-11-2653 7147
E-mail : cemca@nda.vsnl.net.in Website : <http://www.cemca.org>