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## PROGRAMA DE BECAS CIUDAD DE MÉXICO-CHINA 2008

**Propuesta: Programa de cooperación e intercambio cultural para el aprendizaje del mandarín y español entre China y la Ciudad de México a través de la educación a distancia y en línea (EDyL)**

### Anexo

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## Nuevas tendencias en la EDyL

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### **Construyendo Sociedades Urbanas de Conocimiento<sup>1</sup>**

Abdul Waheed Khan,

Director General Asistente de la UNESCO

*El uso de las TIC se ha incrementado en la educación abierta y a distancia. Ello se ha sumado al interés en aumento de la aceptación de sociedades de la información que demuestran una evolución de las sociedades agrícolas y las sociedades industriales. El uso de estas nuevas herramientas potencializa la capacidad cerebral del ser humano hacia el conocimiento, dando lugar así al crecimiento económico, al desarrollo social, apoderamiento político y enriquecimiento cultural.*

*Las sociedades de conocimiento deben llevar entonces a un sistema de pluralismo e inclusión donde sean consideradas las necesidades humanas y sus derechos con el fin de que el conocimiento sea creado, preservado, diseminado y utilizado.*

*Es preciso hallar la manera de insertar a las personas que no tienen acceso a la educación al conocimiento, sin importar las barreras físicas o de diversidad cultural o lingüística. Las necesidades de los nuevos estudiantes requieren a su vez nuevos requerimientos que respondan a ellas. Por ejemplo, las bibliotecas deben de usar las nuevas herramientas para que sirvan para lo que fueron creadas, difundir el conocimiento.*

*A pesar de que la EDyL es considerada como un aprendizaje “informal”, progresivamente se volverá más importante.*

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<sup>1</sup> Resumen de la conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo.

## **Tendencias, Innovaciones y Oportunidades en la Educación Abierta y a Distancia**

(Trends, Innovations, and Opportunities in Open and Distance Learning)<sup>2</sup>

Frits Pannekoek,

Presidente del Consejo Internacional para la Educación Abierta y a Distancia (ICDE) y de la Universidad de Athabasca de Canadá

*Los derechos de propiedad intelectual han obstaculizado el intercambio de información y han generado una tendencia hacia la comercialización de la educación en vez de la preocupación por el mejoramiento de su calidad.*

*El acceso y la masificación de la información tiene sus retos, puesto que mucha de ella no es de calidad. Es necesario, por tanto que haya una regulación o un compromiso de los gobiernos por asegurarse de que la educación que reciben los estudiantes sea de calidad.*

*La educación abierta y a distancia ha fallado debido a que las universidades tradicionales se resisten aún a esta modalidad educativa con el argumento de que la calidad no es suficiente. Por ello surge la necesidad de contrarrestar ese argumento mejorando el sistema de la educación abierta y a distancia, separándolo de los modelos tradicionales y trabajando en conjunto.*

Universities have always been at the forefront of internationalism. The primary beneficiaries of their interest and activity, it could be argued, have been universities in the developed world. Internationalization, some have argued, has allowed universities in developed countries to attract and retain the world's best brainpower. In the past, many of the thinkers that these institutions have produced have argued that international understanding would end global conflict. While some would insist that it hasn't, others will argue that movements toward increasing international collaboration, through the United Nations and other regional associations, have resulted directly or indirectly from these international exchanges, the roots of which date back at least one

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<sup>2</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo

hundred years. More recently, many have argued that internationalization is the route to prosperity, that the world is being shaped by a *new knowledge economy* that knows no boundaries. Learning, therefore, it is argued, is a human right. These declarations are noble and are certainly worth our individual and collective commitment. But where are we now? What have we achieved? What is our future?

Research on the state of learning has been undertaken by agencies of different types: by international bodies like UNESCO, by non governmental organizations like the International Council on Distance Education, by universities and by national agencies. The key questions that these researchers have been grappling with, however, are similar:

1. Firstly, as we advance the rhetoric of the new knowledge economy, what does its ascendancy mean for the resource based economies of the developing world? Some argue that the problems of resource-based economies are being sidelined. Others argue that successful resource based economies will be knowledge driven even at the producer level.
2. Secondly, is learning itself just another commodity, like banking or technology, that should be open to international competition? The various international trade bodies are increasingly pressing to open the educational marketplace to competition. While there may be considerable wiggle room under the GATS for the preservation of national interests, the real issue is not learning itself but its product—intellectual property. IP is being increasingly scrutinized by WIPO, the World Intellectual Property Organization, a United Nations body. WIPO is clear in its direction that nation states should protect the intellectual property of their commercial organizations and citizens. However, certain nation states and educational organizations are exerting considerable pressure to exempt educational institutions, particularly distance education institutions, from such protection. It must be remembered that copyright laws were initially introduced in eighteenth century Britain to ensure the access rights of educational interests. However, access to the best digital information is becoming increasingly restricted and, most lamentably, increasingly expensive, so expensive, in fact, that many post-secondary institutions in the developed world can afford only a small percentage of what is available.

If knowledge is a commodity rather than a social good, so, increasingly, is education itself. Many corporations have their own universities: General Electric's Crotonville, Motorola University, McDonalds Hamburger University, Sun Microsystems Educational Services, etc., and a number of for-profit universities have sprung up: Apollo Group, Sylvan Learning systems, DeVry University, etc. Virtual universities and the for-profit arms of traditional universities, both of which are strongly oriented toward making money, are further complicating the educational landscape.

And this landscape, which is already complex enough, is changing rapidly in other ways as well. For example, international information vendors, a.k.a. textbook publishers, are moving into the provision of learning. And more confusion is being generated by non governmental organizations that are attempting to build collaborations and partnerships to mitigate what they regard as the worst for-profit aspects of the traditional university world. Lines between private and public are being eroded and many new questions are being asked. Few answers are apparent.

3. A third and key question is What should be the national capacity for learning?

This is a difficult question to answer because any answer suggesting limits might be construed by some as a decision to restrict some citizens' access to opportunities to achieve their full potential. On the other hand, developing countries lack the means to create and staff post-secondary institutions that could achieve even the level of participation common in most developed countries today. Many have decided that the only way to build capacity is to encourage the development of private sector or foreign owned institutions, which are often off-shore. This approach can result in the loss of the very best, but are there alternatives?

4. This leads us to the forth question. To what degree should government become the regulator of post-secondary learning? To many, the answer might seem obvious: someone has to ensure that students are receiving the quality of learning and the credentials that they are paying for. But this is a relatively new role for government. In some jurisdictions, post-secondary institutions are and have always been essentially self-regulating. In others, governments regulate either through legislation or through national councils. Indirect forms of regulation are also applied, through the control of student support. For example, some jurisdictions will not provide financial aid to

students who take distance education programs through foreign providers even though financial support is provided to students leaving the home country to study abroad. What are the impacts of these kinds of decisions? Do they encourage the best to leave? Do they marginalize those who need support the most? Do these decisions restrict internationalization to an elite?

5. How do we maximize *brain gain* and minimize *brain drain*. Africa, for example, sends a higher percentage its post-secondary students abroad than any other part of the world but also loses the highest percentage to host countries. Sending students overseas, often at the expense of the receiving institution, is the cheapest way to build post-secondary capacity, but at what cost? Firstly, too few students return to help reshape their societies and nations. Secondly, the capacity to develop a national learning strategy based on the national and regional culture is compromised. Others might argue that, on the other hand, this practice has helped develop truly international solutions to the problems facing the post-secondary world and that it has helped to internationalize business.
6. This leads to the sixth key question. How do we manage the research outcomes of post-secondary institutions so that they have the maximum positive impact? WIPO suggests that this goal is best achieved by controlling patents and copyrights. Others suggest that knowledge is universal and that the best knowledge must be freely accessible. Those who support WIPO will argue that all economic modeling suggests that knowledge has commercial value and that in order to secure capital for investment in the future that commercial value must be protected. There are alternatives to this view, and some are well expressed in Don Tapscott and Anthony D. Williams' *Wikinomics*.

These questions are complex and few answers have yet to be derived or agreed upon. Our governments, our societies and our students are increasingly turning to the university sector for answers. What answers have we generated to these six key questions? I would argue that the post-secondary sector has for, the most part, engaged in defending their existing hegemonies, in protecting the status and value of their brands and in ensuring that whatever the brain drain, it flows in their own direction. Let us look at how the universities have responded to one of the key issues outlined above. How have post-secondary institutions responded to the increased cost

and control of new knowledge? They have reacted in four different ways.

1. Firstly, in the developed world, most have either paid significantly more for or significantly reduced the size of their collections. Others have formed national consortia to purchase materials for the nation as a whole. Some argue that while this approach may control costs now, it will ultimately result in increased costs.
2. Secondly, throughout the developed world there has been an aggressive move to open access. It has manifested itself in various ways: faculty open access archiving, supporting open access publishing and the retrospective digitization of materials in the public domain. This open access movement has probably done more to ensure the internationalization of knowledge than any other initiative. However, it has had its challenges as well. Firstly, most of the free information has been in the humanities and social sciences, which have always been undervalued in any case. Secondly, development of most of the *free* information requires the support of very expensive infrastructure, so the flow of knowledge has been largely one way, from the developed to the developing world and from the English-speaking to the non-English-speaking world.

Universities have also responded by offering their courses freely online to anyone or any institution who wishes to use them. But has this practice really accomplished anything other than increasing the value of certain elite university brands, those of universities that are inaccessible to the vast majority of the world's citizens anyway. Some have also argued that this *sharing* really represents a form of intellectual neo colonialism since the course content was not collaboratively created and, further, since the perception that it is free will undermine the will of nation states to create their own knowledge.

3. Thirdly, in the increasingly competitive international marketplace, the universities of the developed world have been able to attract the best minds through aggressive marketing and lucrative incentives. The flow of internationalization is still one way.
4. Finally, the post-secondary sector has made one major leap forward through distance and e-learning. For the first time, post-secondary learning has broken free from the fetters of geography

and is now available to anyone who can access the technology, still a major issue in much of the world but less so with mobile learning on the horizon. Yet while e-learning offers so much hope, it too has its detractors, who argue that it lacks quality. Many of the new information and learning initiatives would seem to reinforce the ability of open and distance universities to massify learning, but if this is so, why has it not yet happened? There are, I believe, several reasons:

- a. The traditional universities are resistant to open and distance universities, basing their reservations mostly on the quality argument. They know that if open and distance education can offer similar or better quality at lower cost, their arguments for additional resources might be challenged.
- b. Distance and open universities are, for the most part, still modeled on the conventional, residential university. One of the great benefits of the e-world is the ability to harvest the creativity of many for the benefit of even greater numbers of people. However, academics come from a culture of craft rather than that of industrial production. It is the connection between student and master, not the connection between knowledge and learner that is valued. Indeed the master-student relationship is so ingrained that technology is often used to recreate that model rather than to individualize learning as an independent act. Is it any surprise that the open courses offered by many of the world's universities have had so little uptake.
- c. Universities have given little thought to the construction of their own economic realities. What is the value chain in the post-secondary world? Can it be disaggregated? If it can, what would the points in the value chain be? Can tuition for teaching, costs of mentoring, costs of student services, the cost of information, the cost of examinations, the costs of quality assurance, the costs of research and the costs of credentialing be separated? Can the private sector assume some of these responsibilities at a lower cost? What real values do universities provide? How would learners react to a disaggregation of the value chain?

Perhaps a fresh examination of the learning value chain could help us come up with new approaches to open and distance learning universities. Rather than do an exploration of various alternatives to this value chain, I will make a simple proposal, one which I have already offered to

various organizations: the development of a best first year that could be adopted or adapted by any post-secondary institution in the world. This proposal is divided into several economic and learning components for the purpose of argument:

1. Recruitment: All universities spend a great deal of money in this area. But why? Is it to excite students to learn or is it to ensure their market share? If it were to excite students to learn then collaboration among institutions would be possible. But then the real issue becomes whether the students are ready to learn and whether they have the competencies to succeed.
2. Course materials or information: Recent studies by publishers have indicated, for example, that 80 per cent of the first-year engineering program is common to most universities. Other studies have indicated that, while there might be similar expectations in other disciplines, there is considerable variation in content, particularly in the humanities and social sciences. What would happen if the 12 to 15 most common courses were developed and designed, along with appropriate readiness modules, so that there was in effect a common, worldwide, first-year standard. The courses would be available at no cost to any learner, faculty member or institution to use or adapt. The investment to create such a common year would be 20 to 40 million Canadian dollars, not an insubstantial amount, but such a dream is fiscally possible. However I do recognize that learners would need access to affordable technology needed to gain competencies at the highest first-year university level on one's own. And that may be for a while yet, a major impediment.
3. Learning Support: Of course, many students need support to help them develop their learning skills, to overcome learning impediments and to move to the next stage of learning. Learning support involves faculty and professionals at rather intensive levels. Learner support could be obtained from existing universities, from private sector providers or from groups that form on the Internet. Learning support from institutions would have to be charged back to learners; however, there is no doubt that with enough students *enrolled* in the courses, existing or new social software sites could be used as a vehicle for no-cost support.
4. Examinations: Examinations are, to some, learning tools that help learners measure whether they

have gained competencies in a certain discipline. The varying learning modules would have self-exams at frequent points. However, both private and public institutions could offer rigorous testing opportunities at a fee so that students could determine whether they had mastered the subjects and skills.

5. Credentialing: The biggest single issue will be credentialing. No institution would be prepared to credential a course or an entire first-year program without a rigorous set of exams to determine whether the student had mastered appropriate competencies. Post-secondary institutions could charge for invigilated exams and for ensuring the appropriateness of the first-year credential. Some universities would have to be willing to participate in the credentialing exercise. Twelve in Canada have already expressed a willingness to do so.

I know that there are key questions that immediately come to mind? Who is paying the professors to write the courses? Who is paying for the research that underpins all learning? Remember, this is a proposal for a best first year. If it actually worked, academics and their institutions could focus on the second to fourth years of undergraduate study and on graduate studies. The scheme hold the promise of

- creating international standards
- focusing universities not on student readiness but on advanced knowledge
- initiating a re-evaluation of the post-secondary learning value chain
- forcing institutions to collaborate for the benefit of students

## **La Educación Superior en el siglo XXI: los retos de la educación abierta y a distancia**

(Higher education in the 21<sup>st</sup> century: the challenges for open and distance learning)<sup>3</sup>

B.M. Gourley

*Nunca antes tantas personas en el mundo han necesitado educación. Muchas universidades se encuentran imposibilitadas de ofrecer espacios dentro de sus instituciones para los jóvenes que demandan educación ante la falta de apoyo financiero por parte de sus gobiernos.*

*Hace falta repensar el sistema educativo, requiere de cambios dramáticos. La educación ha sido considerada recientemente como una industria abierta a la competencia más que un propósito en beneficio de la sociedad.*

*La tecnología debe ser vista no sólo como un instrumento, sino como una vía que promueva la participación, la apertura, el acceso a la información, y sobretodo que convierta al aprendizaje en algo a lo que cualquier persona pueda acceder.*

*Cinco cosas están sucediendo. La primera, se está tendiendo a la creación de escuelas virtuales con plataformas a través de Internet. Segundo, los publicistas y compañías de medios se forman cada vez más en torno a la tecnología. Tercero y cuarto, se están creando compañías privadas de consejería en materia de educación, publicidad y negocios con acelerado crecimiento y organización. Quinto, organizaciones y universidades ofrecen sus materiales educativos de excelente calidad en Internet.*

*Las universidades que mayormente proveen de estos materiales son las del norte. Se tienen los medios para hacer esta labor más grande y que llegue a más lugares.*

### **1. Introduction**

- 1.1. We live in extraordinary times. Never before has the world been so prosperous, never before have so many people lived such long and healthy lives, never before have we witnessed such dazzling technology and never before have we reached, on average, such levels of

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<sup>3</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo.

education. And yet, in absolute numbers, never before have so many people lived in such poverty, never before have so many died from preventable diseases, never before has the planet been so threatened, never before have so many needed education. And it is education that fuels sustainable development, education that is fundamental to enlightened citizenship, to the peace and harmony – and even the continued life – of our species on this planet. It is an education which will have to reach many many more than hitherto, and an education which must be infused with the dramatic portent of our times – historic times where the extremes are not only unacceptable by any standards but capable of being solved with what we have between us.

1.2. How are we doing in terms of numbers? I remind you of the UN Millennium Development Goals and Education for All programme of UNESCO, both of which secured commitment from a whole range of players. One must acknowledge that progress has been made but in terms of the number of people still not in basic education, much less secondary and tertiary education, there is a great deal more that needs to be done. We haven't enough schools, we haven't enough universities and we haven't enough teachers. What can be done?

1.3. It is clear that, financially, building the vast infrastructure required by traditional bricks and mortar universities, colleges and schools to meet the demand is simply not a viable proposition – even if we could staff such an infrastructure. Governments, policy makers and donor bodies (as well as members of the public) will have come to a point where we have to accept there are other models, for HE at least, which can and do run in parallel with the conventional public sector - a sector which itself will have to change. Such models include:

1.3.1. the private sector - which has grown at a remarkable pace in quite remarkable and innovative ways and is providing a significant percentage of provision in many countries, not just in the developing world;

1.3.2. the Open and Distance University movement around the world - which is moving ahead in leaps and bounds. In India, for example, 24% of students in tertiary education are enrolled in institutions of this sort; and

1.3.3. informal learning, non-traditional learning, learning made possible by the advances in technology, to which I will return shortly.

1.4. There can be no doubt that, in all quarters, higher education is changing quite dramatically. I would argue that change is happening more quickly in the private sector than in the public sector – and that may well be the profit motive working – but the fact remains that new and innovative ways are being found to meet not only the needs of the 21st century, but also the rights of people to be educated, both in the developed and developing countries. The question is whether innovation is being embraced quickly enough and whether we have reached a scale which is necessary to the task, whether technology can help us and whether there is any way we can bring more hands to the wheel.

1.5. I have found in reading through current literature on higher education that the metaphor of a ‘perfect storm’ is being used more often than one would expect, in quite diverse parts of the world. I find that reassuring because it means that there are more and more people realizing just how serious are the changes in higher education. You will remember that a perfect storm can only happen when a whole range of factors are in place and work together. There are of course different outcomes to storms depending on where you are and how you have secured yourself and your property. Being alert to the possibility is however the first step in making sure damage is avoided or at least managed – and maybe a transition to another infrastructure also managed.

1.6. I want to point to some of the factors and forces which are playing out at the moment and ask the question as to what they might mean for higher education – and whether it matters.

## 2. **Factors creating a perfect storm**

2.1. It is appropriate to very briefly remind you of the factors creating a perfect storm. We know that there are dramatic changes in demographics and we know that globalisation has already wrought massive change. Markets are more open than at any previous time, whole new economies are emerging and cultural boundaries are being redrawn. And to this must be added technological change, enabling much of what I refer to, but presenting ever more possibilities and potential. All of these changes promote intense competition, competition between nations, between economies and even universities. For universities in many ways are in the frontline of such competition.

- 2.2. For the purposes of understanding where competition comes from it is useful to think of the underlying forces in what many call a 'new economy'. It is argued that market-driven and technology-enabled innovations have changed the way the economy is organised and the functional 'rules' have changed. Hence the title of Kevin Kelly's influential book '*New Rules for the new Economy*'. At the core of these changes are "*precisely those economic arrangements (that are) related to the collection, dissemination and management of information and knowledge: historically higher education's core social functions.*" (Schuster and Finkelstein, page 6).
- 2.3. Schuster and Finkelstein also argue that "*the economic changes, especially in relation to information and knowledge, are associated with a major ideological and philosophical shift in how society views higher education, namely, increasingly as a private rather than a public good and as an "industry" that must be ever more open to competition within and from without rather than as a protected social institution.*" (Page 6) This of course links to the growing privatisation of higher education. It may well be a concomitant of the so-called 'massification' of higher education where the demands on the public purse are too heavy and simply have to be shared, either with the student, or the employer, or any investor who is ready to provide the experience and make a profit in the process.
- 2.4. What is clear, however, is that the core functions of the university were based on what Carol Twigg calls "*familiar technologies (the book, the classroom) and economic arrangements.*" (Schuster and Finkelstein, page 9) And you change those technologies, change the economic arrangements, and the structure of the institutions themselves and the way they organise their activities also changes – and changes quite dramatically.
- 2.5. In developed countries, but also increasingly in less developed countries, technology has undoubtedly been a major catalyst for change. The Internet on its own has been dramatic enough but as other technologies have advanced we now live in a world where "*merchants in Zambia use mobile phones for banking; farmers in Senegal use them to monitor prices; health workers in South Africa use them to update health records while visiting patients.*" And we realize that although the personal computer changed so much and unleashed all sorts of innovation, it is "*the*

*pocket-size Ultra Mobile Device (UMD) - an all-in-one phone, personal organiser, movie camera, media player, PC and fashion statement*” that will enable the “*networked generation (that is, those in today’s infant classes)..(to)...look forward to an education in which they’ll be able to pick ‘n’ mix from the net, video-conferenced tutorials and DVD-quality distance learning packages which, because of the immediacy of the UMD, won’t seem in the least bit distant.*” (Futurelab July 2007).

2.6. With this convergence of technologies (including near universal satellite coverage), we can now reach people where they are, wherever they are, making learning more accessible than ever before. This clearly has revolutionary potential for the educational endeavour. We already have students who are able to delegate one of their number to attend a lecture and podcast it to their classmates; students who can watch the very best academic performers on their internet sites and not suffer less than best at any particular university; students who can access more and more material on the internet’s open content sites; students who can take one or more courses at universities across national (and certainly individual university) boundaries; students who indeed learn in whole new ways. These are students who are different from their predecessors – in technology terms they are also more sophisticated than their teachers.

2.7. In a recent article for Innovate, the Journal of Online Education, Catherine McLoughlin and Mark Lee describe a future where “*social technologies coupled with a paradigm of learning focused on knowledge creation and community participation offer the potential for radical and transformational shifts in teaching and learning practices, allowing learners to access peers, experts, and the wider community in ways that enable reflective, self-directed learning.*” This is of particular significance, they argue, “*in a postsecondary education climate where there is likely to be continued blending and merging of informal and formal learning, where the value of textbooks and prescribed content is already being questioned, and where the open-source and open-content movements.....are finally being recognized, supported and accepted*” and can result in “*educational experiences that are productive, engaging, and community based and that extend the learning landscape far beyond the boundaries of classrooms and educational institutions.*”

2.8. The consequences for the system are colossal. The physical facilities have to be different; the nature of the materials produced has to be different – especially those that do not

harness the technologies available; the material produced needs to match up to the best on open content sites; and, importantly, the ways of learning are different. And of course quality benchmarks are going to be different as well. In a world where the mobility of students is highly prized and competition intense - quality and quality assurance are very high on the agenda. Quality and associated 'brand' have probably never been more important. More and more universities for the first time are hiring marketing specialists and advertising consultants, conducting branding campaigns and generally behaving much the same as ordinary businesses do in a competitive environment. As students are being required to pay more for education, they are increasingly alert to their job prospects and to the economic value of degree offerings. As the realities of globalisation dawn on more and more people universities are doing more to internationalise their offerings.

2.9. And as the demand for higher education worldwide becomes ever more critical, more and more private sector businesses are moving in to the market. We now have 'corporate' universities which can tailor the material to their own preferred outcomes, and private for-profit providers such as US-owned Kaplan Inc, the University of Phoenix and Australia-based IBT Education which offer a whole range of disciplinary offerings. Most of these look very much like ordinary universities - and there are a growing number all over the world, even in developing countries. They have huge cost advantages and are building brand dramatically. There is no doubt they change the game.

2.10. Even the fundamental function of a university - research, more especially scientific research – has been dramatically changed. I remind you of the likes of InnoCentive, a company founded by the pharmaceutical Eli Lilly in 2001, an open, online platform that connects world-class scientists, engineers, professionals and entrepreneurs with companies to collaborate on complex scientific challenges. It now has more than 145,000 engineers, scientists, inventors, business people, and research organizations in more than 175 countries interested in solving problems – and it represents a fundamental transformation in research and development.

2.11. Perhaps the most dramatic of the changes is the 'unbundling' or disaggregation of educational activities and processes, turning them into lots of different businesses – and that in

turn changing the landscape in ways few of us could have dreamed about. It also changes the costings and pricing assumptions that we make at present. New providers have emerged that target specific activities and processes. Let me give you a small list of four to illustrate the point:

2.11.1. Firstly - you just have to think about organisations like Blackboard and eCollege (which is now owned by Pearsons). They provide the means for establishing online campuses as well as enhancing the academic programmes themselves. What they have facilitated is of course the whole e-learning business where traditional universities which were not really in competition with the OU (for example) are now very much in competition. The nature and value of this market is difficult to quantify but let there be no doubt it is there and growing.

2.11.2. Secondly - publishers and media companies have turned the textbook market into entirely new businesses. Think about Pearsons, Thomsons, Sage, and Elsevier. These are organisations which might have partnerships with universities which accredit their offerings – and those offerings I will remind you are mostly conceptualised, designed and written by top academics working part-time for handsome remuneration and unconstrained by faculty boards and animosities, senates and their internal politics, and bureaucracies and their geological time lines. Publishing, as an industry, has been deeply affected by technology, and in particular the Internet. Everybody is a publisher now – and scarcity has turned into abundance. Not only that, but models of authorship (and the vast collaborations made possible by the Web) have turned a range of traditional practices upside down. Pearsons, for example, no longer describe themselves as in the publishing business but rather the education business.

2.11.3. And thirdly - there are companies that offer remedial and supplemental educational services or counselling such as Sylvan Learning Systems (the original tutoring business now morphed into an internationally focussed higher education company called Laureate Education Inc) or Stanley Kaplan (owned by The Washington Post). Kaplan has already extended its reach into partnerships with several universities in the UK. Lest you imagine this is an American phenomenon, the front page article in the UK Times Higher Education last year (September 21, 2007) carried a story with the headline 'private tuition booms'. One of the biggest in the UK reports a 40% increase in their business in the last two years. Even the business of assessment

has private sector outsourcing to companies such as Edexcel. Nothing seems sacred. Pearsons now also own Edexcel.

2.11.4. Finally - there are others around (such as Teaching Company or Recorded Books) providing excellent lectures (catalogue lists over 300) by award winning academics. And then there is iTunes University, which delivers access to course content from hundreds of colleges and universities (including The UK Open University!), so users can easily search, download, and play educational material just like they do music, movies, and TV shows. Add to this the increasing amount of online lecture content and Web resources and you have a whole new world. Overlay the whole concept of Web 2.0 on education and you will discover a whole new world indeed.

2.12. You may wonder why I spend so much time drawing your attention to these matters. I do so because I believe these trends have profound consequences for the business model upon which all universities run their operations – and because I believe that embracing the unprecedented opportunities offered by our global technologies is not only the major strategy for addressing the massive demand for higher education in the 21st century, but also for re-engaging youngsters with the education endeavour.

3. **These changes prompt some tough questions in higher education. Just two examples:**

3.1. Firstly we have to ask ourselves some serious questions about the production of some of our teaching materials, not only because the traditional model is an expensive one but also because it is relatively slow in a world growing so accustomed to the swift satisfaction of consumer needs. The OER movement is very significant in this respect: it has the capacity for reducing the cost of education, while at the same time diversifying the provision – especially in higher education. At the moment, for the most part, we have an expensive ‘business’ model where each university devises its own version of relatively straightforward material. One has to ask how different can undergraduate Chemistry or Physics be? The high level and expensive staff resource that presently goes towards presenting different courses to different students in

various parts of the world is, to my mind, difficult to justify in the face of the pressing need to reduce cost and reach more people.

3.2. We also have to ask ourselves some questions as to how best we deliver 'customer service' and student support in this new world and how we harness the technology and the social networks it has spawned to enhance student support with peer-to-peer mentoring and collaborative learning models; how we deal with the shifting boundaries between formal and informal learning; how we harness the content that is being created on the internet in this remarkable new way. What we see on the Web are people from all over the world creating communities of interest (some of them very sophisticated indeed) on a whole range of subject matter – and what we need to do is ask ourselves how we harness this energy and recognise the learning – how we learn from how our students are using the internet and all its networks.

#### 4. **So what implications does this have for open and distance learning?**

4.1. Quality: there are some who remain sceptical about the quality of the learning experience delivered via technology and cite the centrality of the conventional face-to-face teacher-student relationship. Throughout its history, however, the OU in the UK has explored and exploited cutting-edge technological innovations to provide a high-quality, responsive and truly interactive open and supported learning environment. Indeed, the quality of our teaching has received the highest rating in the UK for student satisfaction for the third consecutive year in the 2007 National Student Survey. We use telephone and email of course, and we do have face-to-face (if students want it) and residential schools, but our virtual learning environments are astonishingly well used .....and students love it!! Wikis, blogs – you name it.

4.2. And then there is the rise of the Open Educational Resource movement - one of the most exciting developments made possible by the web. Several universities have placed educational resources on the web, free to use to people anywhere in the world – including the UK OU. You can imagine how significant this is for the many people who do not have access to decent libraries, textbooks and educational media. In the science and technology domains where Africa and elsewhere are so desperately short of people educated in these disciplines, it is manna from

heaven. The Open University keeps statistics of the number of visitors to our OpenLearn site as do MIT and others who have joined the movement. The figures are astonishing, being accessed by millions and millions of users from virtually every country in the world.

4.3. One needs to understand however that it is universities mostly in the northern hemisphere which are making material available – and while the material relating to science might not be dominated by a particular world view (and even that could be contested), that relating to the humanities and social sciences is seriously deficient of material which would be recognisable and embraced by people whose cultures and traditions are very different. And that is before we begin thinking about language issues. These are non-trivial matters especially in the educational endeavour. If would-be and unconfident learners recognise nothing of what they know in educational materials, it is much more difficult for them to progress. We have a leadership challenge here for universities all over the world. It seems to me that if universities do not recognise the importance of changing the present dominance, it is difficult to imagine who would.

4.4. We can, however, take hope from projects such as the Commonwealth of Learning supported WikiEducator facility. WikiEducator is an online global community of scholars, teachers and trainers from remote locations who are committed to the collaborative authoring and development of free educational content for use in a variety of teaching situations. These OERs can then be re-contextualized and repackaged for use in their own teaching and learning situations. Launched in 2006, its use is growing rapidly with the number of registered users passing the 1500 mark and number of visits per month now exceeding 80,000.

## 5. **In conclusion**

5.1. Ladies and gentlemen - the wonderful thing is we have the means for education for many, many more people; not conventional education for the few (relatively speaking) who can travel the distances to physical sites of learning, more especially universities. That perforce will remain the privilege of the few. But our science, our technology, our imagination and our ingenuity have brought us now to a situation where we have other means.

5.2. There is now near universal satellite coverage, there is an internet which holds vast and ever-growing stores of knowledge, and we have learnt much about pedagogy and how to teach and learn in this new environment. Mobile telephones and other technologies have now converged - nowhere is this more potently displayed than in the new Apple iPhone. Technology prices are dropping all the time while robustness and reliability of the technology is dramatically increasing all the time. So it is an exciting time full of possibilities – possibilities way beyond any possibilities at any time in our history.

5.3. So my thesis today, ladies and gentlemen, is that we exploit the potential of the new technologies and embrace the distance education opportunities now rendered possible by them and also the networks they have spawned. And we do so in the conscious knowledge that they may well be central to the solution of many of the problems facing us in the 21<sup>st</sup> century – indeed as James Martin has reminded us, the very meaning of the 21<sup>st</sup> century is that we do solve these problems.

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## **Transformación: Retos y Oportunidades**

### **Educación Vocacional abierta y a distancia en Nueva Zelanda**

(Transformation: Challenges and Opportunities – Vocational ODL in New Zealand)<sup>4</sup>

Dr Paul Grimwood

Presidente de la Universidad Politécnica Abierta de Nueva Zelanda

*El caso de Nueva Zelanda puede ejemplificar mucho de lo que sucede en distintos países del mundo. Ha comenzado a instaurarse un nuevo paradigma acerca de lo que significa estar interconectados a través de una red que une a distintas instituciones de educación con el fin de ofrecer un servicio a todos aquellos que tengan acceso a ésta. Pero la tendencia tiene que enfocarse hacia la creación de una red internacional en donde no exista competencia, sino colaboración. Para esta red internacional se necesitan por supuesto nuevas características, pero más que nada, la intención de cooperar en un objetivo común.*

### **Overview**

The intent of this paper is to consider the new “network” paradigm for tertiary education provision that is emerging in New Zealand under current Government policy reforms and to say something about the potential role of open and distance learning within this process.

While the New Zealand situation is in certain respects idiosyncratic, I hope the underlying themes and issues will be broad enough to provide some food for thought in relation to your own organisations and jurisdictions.

The network paradigm involves looking at individual teaching and learning institutions, and the learners in their “catchment” areas, in a new way.

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<sup>4</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo.

Rather than operating only as stand-alone entities, institutions will increasingly operate within the wider context of a national network (and within various “sub-networks” constituted for particular purposes) which can provide learning services to individual institutions.

In turn the individual institutions may supply services to others in the network (although doing so is not a requirement to belong to the network.)

Implicitly I am introducing two concepts:

1. A network is a group of interconnected institutions which provide learning services to learners in their catchment area and/or to other institutions in the network to assist in their delivery to learners.
2. An institution and any satellite campuses are considered as a node in the network.

For the sake of clarity, and, in other contexts, to make use of findings in related disciplines, the rest of this address simply refers to “the nodes” and “the network”.

The question this paper begins to address, without any claim to have fully answered it, is:-

*For the learners in the catchment area served by the network as a whole, how do we maximise the value of their learning from the assets, capabilities and capacities of the nodes in the network within an overall funding constraint while taking account of the constraints on each of the nodes?*

### ***The framework for discussion***

At The Open Polytechnic of New Zealand we have been considering this question for several years now. As Government policy changes have been foreshadowed, then progressively enacted, we have sought to identify how a specialist national open and distance learning provider such as The Open Polytechnic can help enable the network model. We are aware that related efforts are proceeding in other organisations.

In an attempt to be as clear as I can be in this address, I have adopted the following framework:-

1. A particular example is considered<sup>5</sup>:
  - The learners engaging with the Institutes of Technology and Polytechnics (ITP) sector in New Zealand, in which The Open Polytechnic operates.
2. The Government's Education Policy context in New Zealand is described.
  - Recognising that this determines the boundaries within which the optimisation question posed earlier is to be answered.
3. Some of the characteristics of the nodes in the network are described.
  - One purpose is to indicate that the nodes are quite different from each other.
  - Given that this conference is mainly for people associated with distance learning and that The Open Polytechnic of New Zealand is an open and distance learning institution, it may not surprise you that more emphasis is on our own organisation than on the others.
4. The envisaged process for providing educational services to the learners is described.
  - The premise is that the services can be supplied from any node in the network provided the capability and the capacity to do so exist at the node.
5. Some of the conclusions drawn, and some of the principles applicable in the New Zealand context, are noted.
6. Some thoughts on the possible implications for other learners, in other networks, in other contexts are proffered for discussion.

### ***The learners served by the network***

The catchment area of tertiary learners is taken to be the whole of New Zealand<sup>6</sup>.

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<sup>5</sup> A later technical paper will explore the complexities of this situation in more detail.

New Zealand is a small country by most standards. It is a long narrow country roughly the size of the United Kingdom. It has a total population about the size of Sydney in Australia, or Birmingham in the United Kingdom.

There are numerous types of tertiary institutions in New Zealand: 8 Universities, 20 Institutes of Technology and Polytechnics (ITPs), 3 Wananga (Maori Universities), some 40 Industry Training Organisations (ITOs), and hundreds of Private Training Establishments (PTEs).

The twenty ITPs can be compared with four equivalent institutions in Sydney, both serving similar populations.

Another comparison is between the number of tertiary learners in New Zealand and in some other institutions internationally. The 31 publicly funded institutions in New Zealand provide learning to less than half a million learners. I am aware that some of my colleagues on SCOP have over a million learners in a single institution.

If we were starting with a blank sheet of paper in New Zealand I very much doubt that we would create 30 or so publicly funded tertiary institutions.

The reality, however, is that we have them. The challenge is to extract as much value from the investment they represent, for the benefit of learners and the nation.

In general, the different types of providers appeal to different kinds of learners, even though there may be some similarities in the course/programme offerings in parts of their portfolios.

For the purposes of this address I have adopted the following descriptors<sup>7</sup>:

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<sup>6</sup> New Zealand providers do meet the needs of some learners internationally, although the numbers are relatively small. The forthcoming technical paper referred to in footnote 1 will describe an analytical methodology able to accommodate both on and offshore learners.

<sup>7</sup> This simplification is intended to promote clarity. The forthcoming technical paper referred to in footnote 1 will explore the complexities in more detail.

“The learners”: Those tertiary learners who consider themselves best served by the 20 ITPs.

“The network”: The 20 ITPs, interconnected and considered collectively.

“A node”: An ITP, including any satellite delivery points (campuses) it has.

### ***The Government’s Education Policy in New Zealand***

As noted earlier, New Zealand is currently undergoing a new and significant period of tertiary education policy reform.

The watchwords are “quality”, “relevance” and “access”.

Under the reforms the Government is seeking a stronger emphasis on measured outcomes in tertiary education, closely linked to New Zealand’s economic and social transformation goals.

It wants stronger steering and guidance from the centre to ensure this happens.

It wants institutions to view themselves less as stand-alone entities, and more as collaborators supporting what is described in policy terms as a “national network of provision.”

Exactly what a “network of provision” might constitute and how it might operate on the ground is still the subject of ongoing debate, discussion and thinking.

Certain elements are clear, however.

Previously funding was determined solely by student enrolments, with a consequent incentive for institutions to pursue competitive behaviours. Under the new policy, funding is now delivered through a broader-based “investment” approach.

Enrolments are allocated to individual institutions after negotiation with the centre and capped over a three-year planning horizon.

The change is from delivery by individual institutions responding to market forces to delivery by a network of collaborating entities steered – lightly we hope - from the centre.

For a range of reasons, the ITP sub-sector is at the sharp end of the reform process.

It is also the test-bed for another key aspect of the policy reforms – a focus on regionally-based provision.

During the more competitive “free market” system that operated prior to the current reforms, ITPs were able to offer courses and open campuses wherever they chose to do so.

In the chase for student enrolments, it made sense for institutions in regions with a lower population base to open sites in regions with a larger population base – particularly in New Zealand’s largest and fastest-growing urban area, Auckland.

Under the current reforms, however, the Government wants ITPs to return to their local roots. It wants them to focus on serving their local and regional communities and industries. It wants a pull-back from “out-of-region” provision.

The exceptions will be niche programmes in areas of specialist capability that will have the green-light for national delivery.

### ***The nodes in the network***

The 20 nodes in the ITP network vary widely.

Some deliver wide portfolios in urban conurbations, with other providers in the same conurbation. Others deliver in somewhat smaller cities with one or two other providers. Still others are in smaller provincial cities and so deliver correspondingly narrow portfolios. There are even smaller ones, serving small populations with a narrow portfolio.

Size is not the only distinguishing characteristic. The nature of the offerings also varies widely. For whatever reason, perhaps historical, perhaps because of local demand, some nodes offer niche provision nationally. This characteristic seems unrelated to the size of the institution.

These are just two examples of the differing attributes of the nodes of the network.

For the purposes of this address, it is relevant to recognise that the emergence of e-learning has meant that the capability traditionally associated with the nodes is changing. There is an increase in the ways learners in contact institutions can access their learning. There is an increasing capability to deliver at distance.

Does this imply that the pundits who espouse convergence will come into their own? I doubt it. I am not the first to doubt. Others have their reasons. As do we. Ours are quantitatively founded.

We have looked at the economic cost to New Zealand of establishing self sufficient e-capability at each of the nodes in the ITP network. We have also considered the cost of providing all e-capability from a single entity, thus extracting maximum value from the economies of scale associated with e-learning, and the need for a critical mass of appropriately qualified people.

The difference in cost is, in NPV terms, over \$2 billion NZD. The precise amount depends on the time horizon and the discount rate, among other variables. This can be compared with the total amount New Zealand allocates to all tertiary education annually, about \$2.5 billion.

The examples I have given are, of course, ends of a continuum.

I do not for a moment suggest that the actual situation will be one or other of the two ends of the spectrum. All sorts of criteria, not just the economic cost to New Zealand, will affect the extent to which convergence takes place.

The other variables affecting the choices about e-learning do not affect a key conclusion. Convergence as the pundits would have it – the demise of the difference between contact and distance – will not, in my view, occur. This is not for technological reasons but for economic ones – we simply cannot afford it.

The challenge for all of us in New Zealand is:-

*How do we address the optimising question posed earlier taking into account not only how the nodes are now but how they might be in the future?*

This segment of my address introduces the notion that nodes are different from one another - and the differences need to be taken into account. Furthermore, the differences will change over time – and these need to be taken into account over time.

### ***One of the nodes***

Earlier I indicated that, for a couple of reasons, I would consider The Open Polytechnic of New Zealand in more detail than the other nodes.

The Open Polytechnic of New Zealand:-

- Is a national provider, at a time when government policy emphasises regional provision
- Is an open and distance learning (ODL) institution
  
- Enrols 30,000+ learners annually

- This is the largest number of learners of any ITP in New Zealand. Yet, as you are well aware, it is a minnow by world standards.
- Delivers applied vocational learning, mainly at certificate to degree levels.
- Originated as a paper based provider some sixty years ago.
- Now delivers in multiple modes.
- Has been assessed independently as having the most developed capability in e-learning of all ITPs in New Zealand.
- Is recognised internationally: the Commonwealth of Learning Award for Excellence in Distance Education; the Mellon Award for its contributions in e-learning.

Significantly when considering the network identified in this address, The Open Polytechnic recognises the economies of scale associated with ODL institutions. It also recognises the characteristics of the contact institutions that comprise the other nodes in the network. One is that they do not have the economies of scale associated with an ODL institution. Neither have they traditionally had the internal structures, processes or pedagogies to support ODL<sup>8</sup>.

Some ITP institutions are beginning to develop these attributes. It seems to me that, in the process, they are beginning to recognise the capability requirements and the financial implications of operating dual mode institutions. They are beginning to recognise, as you know well, how daunting those capability and financial issues are.

Other ITPs have recognised that it is beyond their funding capabilities to replicate for their (relatively small) learner population a self sufficient ODL capability. For example, six institutions wish our institution to design, develop and deliver with them a blended business degree (delivered online and supported by them in face-to-face mode).

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<sup>8</sup> I have acknowledged earlier that some institutions are developing some e-distance capability. I observe that this is still rooted in a contact framework, in the main. Technology is being used to (attempt to) replicate the contact experience.

In this instance, the complementary attributes of the two different kinds of organisation, blurred as the differences may be from the effects of convergence, provide opportunities for adding value to the learner.

Apart from the pride I have in the capability of the people in my own institution, I have drawn attention to the characteristics of The Open Polytechnic for two reasons:-

- To engage with all of you in ODL institutions
- To pave the way for discussing how the network can be optimised.

### ***Collaborative provision***

As I have indicated earlier the ITP network consists of 20 interconnected institutions.

I have visited each of these institutions, some of them many times. They have their own character and attributes. A casual observer would see them as being very different. There is considerable advantage to the institution in being able to offer a unique “face” to their learners.

In our work on identifying how to optimise the network, we came to recognise that 19 of the 20 had essentially similar models for the delivery of learning. It is an institution-centric model: learners come into the institution’s world. One organisation, ours, is different: we go into the learner’s world.

That difference is pivotal.

It enables the network to access synergies not available to the 19 other institutions. It means that both learners in New Zealand and the nation as a whole can derive greater benefit from having “19 similar and a different one” than from 20 similar organisations.

As an ODL entity with economies of scale and capabilities, strategies, processes and systems to go with those economies, we are complementary to mainly campus based institutions.

A significant difference is that economies of scale are not present in mainly contact based institutions in the same way or to the same degree.

You might ask: “What is the significance of that?”

Let me respond with an example.

One node in the network has a region where there are about 250,000 potential learners. Only about 75,000 are able to access the institution in a practical way. Some are too far away. Others have work schedules that do not mesh with class times. Still others prefer working in their own time and place.

This is familiar territory for those in ODL provision.

That institution and ours aim to operate collaboratively, taking advantage of the different characteristics of both organisations. We will deliver to the partner’s region at a distance.

The learners will access support from the local partner at agreed times, but much less frequently than required by contact delivery. The learner experience is enhanced to the benefit of the learner and, in the process, to both institutions.

A reflection on both institutions’ part is that if New Zealand did not have ODL capability already developed, it would either have to develop it, or establish more contact institutions of a similar kind to those already existing.

As an indicator, we have calculated that it would cost New Zealand about \$1.4 billion (NPV at 5 and 10 % over ten or twenty years) to replicate our distance capabilities in the other nineteen institutions in the network.

Our analyses and our thinking confirm that optimising an institution in a region of New Zealand, in isolation, small as those regions are, precludes accessing economies of scale, in particular those associated with ODL, in whatever mode it operates. It costs the nation.

A conclusion emerges. For us it happened over time. Perhaps for you it is self evident.

For many reasons, some I have touched on in this address, it is imperative we focus on optimising the network in New Zealand. It is not enough to consider the nodes individually, if we are to maximise the value from the system for learners throughout New Zealand.

### ***The optimising process***

The approach to optimisation is deceptively straightforward.

It starts by recognising that after all the advocacy for greater allocations from the public purse for tertiary education, there is a limit, for tertiary education generally, and for the ITP network we are considering, in particular.

In politically practical terms, it is a given that the 20 nodes in the network will remain, and will continue to provide their traditional services. That implies that there will be a level of funding provided to maintain a node and its ability to deliver its traditional portfolio.

In conceptual terms, the network is optimised when the maximum value to learners served by the network is achieved within the funding constraint.

In linear programming terms, this objective function can be recast as its dual: for a given configuration of courses and programmes, what is the minimum cost of providing them?

The optimising process begins when changes to the portfolios at the nodes are contemplated.

*The decision rule is straightforward: the value to learners is optimised for learners when courses and programmes are sourced from the lowest-cost source in the network.*

For the network being considered in New Zealand, 19 nodes are similar in their business models (they are essentially contact institutions). With these nodes, there is little that can they can offer to other nodes by way of less expensive courses and programmes.

Because of the physical distance between the nodes and the limited economies of scale of the nodes, it is a better option to develop the capability to deliver at the node.

So a node has options when other nodes offer economies of scale. It can offer a wider degree of courses and programmes to its catchment area for the same level of funding if it has access to nodes which have economies of scale, and deliver the courses and programmes of interest to the node.

One can envisage a planning process at each node. It comes as a series of questions:-

- What do learners in my region seek?
- What does it cost to provide their needs if we design, develop and deliver the learning?
- What can we acquire from other nodes in the network that meets all our requirements, including quality, at a lower cost?

In order to follow this process all sorts of information needs to be freely available at all the nodes in the network. Furthermore, there need to be incentives for each node to act so as to optimise the whole network, not simply the situation for the node.

There is much work to be done to take the concept into an operating reality. To this point we are comfortable that in terms of The Open Polytechnic's potential contribution we have ways of dealing with the challenges.

### ***The optimising principles***

Our organisation does not claim to have identified all the optimising principles. We have simply discovered some along the way.

- Optimising the situation for each of the nodes in isolation does not optimise the situation for the network as a whole.
- Aggregating distance capability, not necessarily to a single node but in that direction, is consistent with optimisation.
- There is value to the network in promoting delivery of similar national qualifications, as opposed to nodally distinct qualifications.
- Decision processes within the nodes need to be incentivised to choose options contributing to optimising the network while achieving a satisfactory outcome for the node.
- Large enrolment courses and programmes will gravitate to organisations with economies of scale when optimisation of the network is being sought<sup>9</sup>.

As I stand back and think about these principles, I am affected by a conclusion that we have been working with for a long while. All our nodes have capabilities. They are different capabilities. The network is optimised when we all tap into those capabilities, not when we try to replicate those capabilities in each of the nodes.

### ***Transforming The Open Polytechnic***

The strategic drive of The Open Polytechnic of New Zealand is to prepare ourselves for contributing within the emerging network environment.

Whatever its final form, that environment will involve a much greater degree of flexible partnering and collaboration.

We see a natural role for The Open Polytechnic in supporting and enabling a network model of the type I have been describing.

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<sup>9</sup> I am appreciative of the continuing engagement with the Tertiary Education Commission of New Zealand as The Open Polytechnic seeks to contribute to ongoing discussion and thinking regarding optimisation of the network of provision.

This ranges from supporting e-distance capability building, providing shared resources and services, and various forms of flexible blended delivery arrangements, to continuing to support distinctive segments of distance learners.

It is a given that we will retain and build on our established capability in open and distance learning. But we do not see this as being our sole distinguishing characteristic in the future.

We see ourselves increasingly operating as an 'intermediary' – brokering flexible learning services and resources for partners, sourced both from within our organisation and externally.

Relationship management will therefore be a new key competency for our organisation; as will innovation in learning design, and in forging and supporting flexible learning partnerships.

Our governing principle will be to act in ways that deliver value for learners and the nation.

### ***Some possible implications in other contexts***

I approach this section with temerity!

Who am I to preach to my colleagues operating in other contexts?

I have no right and make no claims.

I simply share with you some of the thoughts we have had along the way.

Make of them what you will.

We would enjoy your sharing with us what your situation is and how you are approaching it.

We can learn from it.

You will inform development of education in New Zealand as well as your own country.

One of our thoughts is that optimising the network is very dependent on the context.

We thought of the US. We saw a much higher population density. Nodes are in close proximity. There seems to be so much more opportunity to create ways in which organisations can be collaborative.

For example, in New Zealand our nodes are generally widely dispersed. It is not unusual for them to be 150 km from their neighbours in the network, though some are much closer. In the US we envisage that potential nodes can be less than 30 km. It seems to us that there may be other ways of optimising delivery in the region.

We thought of remote parts of Africa. We acknowledged the remoteness. We thought of the network as being bounded by the technology it could access. We saw the principles as still applying, but in ways producing very different outcomes from the New Zealand setting.

We thought of China. We are aware that television is ubiquitous. We understand while rapidly growing in use cell phones are not yet ubiquitous, nor is the internet. Again it seemed to us that the principles may be applicable, but likely with different outcomes.

In this section I am not trying to be prescriptive. I am simply saying that we are conscious of you all, in your environments – and would like to engage with you in them.

### ***Next steps***

We are proceeding with our analytical initiatives.

We are confident that there are ways in which we can quantify the value of optimising the network in the way I have described.

We aim to gather our colleagues in implementing optimisation of the network.

We will keep you in touch with our progress, if you would like. Please let us know – and we will follow up.

**Superando obstáculos en la construcción de una Ciudad de Aprendizaje:  
el Caso de Brasil**

(Overcoming Obstacles in Building the Learning City: the Case of Brazil)<sup>10</sup>

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*De todas las ciudades más grandes del mundo, ninguna ofrece acceso gratuito a Internet a todos sus ciudadanos. El caso de Brasil es un buen ejemplo para demostrar la situación en que América Latina se encuentra en materia de educación. Brasil invierte menos de lo que debería en investigación y desarrollo, y tiene un bajo porcentaje de alumnos graduados en ingeniería así como en inscritos en el nivel de educación superior en comparación con países como Canadá, China, Estados Unidos y el Reino Unido.*

*Sorprende notar que en la evaluación más reciente que realizó el Ministerio de Educación en Brasil con respecto a los conocimientos de los estudiantes de nivel superior los alumnos que estudiaron a través de un programa de educación a distancia obtuvieron mejores resultados que aquellos que tomaron cursos en salones de clases convencionales.*

*Cada vez se han ido sorteando más obstáculos, pero ahora el costo de la traducción de los programas de educación a distancia es uno de los principales.*

The history of formal learning offers examples of centers of excellence in both isolated non-urban settings and densely-populated metropolitan clusters, each providing an environment for work and study appropriate to its surroundings. There can be no doubt, however, that the new world of digital communications will permit the increasing democratization of access to knowledge and to the certification of competencies. If, in the past, there was a tendency for many to flock to cities to be among skilled professionals, to take advantage of the comforts of a consumer's marketplace, and to prosper amid the opportunities to innovate and to grow through the rich exchange of ideas, then the new information technologies will diminish whatever differences previously existed between towns and cities, between the periphery and the center.

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“Learning cities” are population centers, both large and small, which reflect the new values of the knowledge society—namely, that people constantly acquire and produce new information as an economic activity and as a form of leisure. They represent one of several regional development strategies, offering “a mix of resources,” and serving as “incubators for the knowledge society.” Possessing institutional structures featuring modern technologies and workers with cosmopolitan values, learning cities have in common several clearly identifiable characteristics:

- Explicit commitment to placing innovation and learning at the core of development;
- Priorities for lifelong learning, innovation, and the creative uses of information and communication technologies;
- Subtitles like: Cities-Without Walls; Educational Cities; Ideopolis—Knowledge City Regions; Digital Cities; Digital Communities; Intelligent Communities; Information Cities; e-Cities.<sup>1</sup>

Although many such cities are small and hardly known outside of their local regions, several large metropolises have inaugurated activities which fall under the heading of learning cities, among them Seoul, Singapore, Tokyo, Hong Kong, Stockholm, San Francisco, Tallinn (Estonia), New York, Beijing and New Songdo City (Korea). But none of these large cities as yet gives free Internet access to all of its citizens.

What are the benefits to individuals in learning cities?

- “Acquisition of knowledge, skills and understanding...formally or informally;
- “Improved wages and employment opportunities.”

And the benefits to institutions and society?

- “A more flexible and technologically up-to-date workforce;
- “Learning for competitiveness;
- “Partnerships of towns, cities and regions...collective learning...continuous exchange and flow of information about products, processes and work organizations...based on stability and trust.”<sup>2</sup>

Brazil, a country which covers about half of the continent of South America and about half of its population, at the present time is the world’s tenth largest economy, but it demonstrates a need

for serious capacity-building. Almost at every step of the educational process we find results that fall short of the demands of a society in the knowledge era.

In 2007, PISA, the well-known OECD annual evaluation of the learning performance of 15-year-old students in a large group of countries, was revealing. In the area of Reading Comprehension (“understanding ambiguities, formulating hypotheses and critically evaluating prepared texts), while the students in Finland achieved the highest rating (over 80% did well on the test), those in Brazil were among the weakest (only 25% did well). Likewise, in a World Bank study in early 2008, evaluating young people in Latin America, 10-14 years of age enrolled in primary education, those from Brazil did extremely poorly.

- Of the 19 countries included in the study, Brazil ranked 15<sup>th</sup> (behind Bolivia, Peru, Paraguay and the Dominican Republic);
- The top-ranked countries: Chile, Jamaica, Argentina;
- Below Brazil: El Salvador, Honduras, Nicaragua, Guatemala;
- “Schooled Illiterates” – a term taken from another World Bank study of Brazilian children 7-14 years of age, and in school – 87% cannot read and write.<sup>3</sup>

The Brazilian Institute of Geography and Statistics earlier this year revealed that while in 1997 the Brazilian population had 5.8 years of formal schooling, in 2007 this figure rose to only 7.3 years.

Brazil invests less than it should in Research and Development, as shown in a recent OECD study:

- Average of the 29 countries of OECD: 2.4% of GNP
- Chile: 1.2% of GNP
- Brazil: 1% of GNP

In 2004, of 72,000 industrial companies in Brazil:

- 1.7% invested significantly in R & D
- But this small group grossed 30% more than its competitors, had greater profits, exported more, and paid better salaries

Of course, it is difficult to say with confidence whether the investment in R & D brought about the success, or whether the success permitted the investment..

Brazil currently has only 17% of its college students studying with engineering, science and mathematics as their major fields. A recent study of where Brazilians who had obtained doctoral degrees were working revealed that:

- In 2004 8,094 doctoral degrees were awarded (10th place in the world)
- But Brazil is only in 27th position (in relation to 1:100k population)
- Of the total of doctoral degrees in 2004, science/engineering (4726) (58.4%)
- Plan for 2010: 16,000 doctoral-degrees awarded annually
- Where do doctoral degree holders work: education (44%); public administration (43%); unaccounted for [unemployed? changed profession?] (13%).

There is a serious deficit of engineers in Brazil, both in total numbers graduating each year, as well as in relation to those graduating in all other academic fields, as this comparative chart demonstrates.

### Deficit of Engineers in Brazil

Country	Annual Grads.	Grads/ % of Total
Brazil	41,491	5.6%
Germany	39,276	12.6%
Japan	130,986	19.7%
Korea	79,622	26%
Mexico	55,864	14.3%
United States	138,134	6.2%
United Kingdom	45,347	8.8%

The International Labor Organization of the United Nation predicts that the growth of renewable sources of energy will create 20 million new jobs around the world by 2030. 12 million

alone will be in the area of ethanol, the biofuel made from sugar cane, corn and other renewable sources. Over the last three decades, Brazil has invested heavily in ethanol technology and now represents 53% of the world's ethanol trade, in addition to having as "flex-fuel vehicles" (running on ethanol, gasoline ou natural gas) 70% of its domestic automobiles. But for Brazil to meet its goal of tripling ethanol production in the coming years, it will need ever greater numbers of scientists and engineers.

Brazil now has the greatest number of workers in ethanol:

--	Brazil:	500,000
--	United States:	312,000
--	China:	266,000
--	Germany:	95,000
--	Spain:	10,000

But too few workers in the recycling of refuse:

--	China:	10,000,000
--	U.S. & Europe:	3,500,000
--	Brazil:	500,000.

Likewise, Brazil is far behind other countries in the percentage of its young people involved in higher education studies:

--	Brazil:	12% (5 million)
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--	Chile:	30%
--	Argentina:	30%
--	United Kingdom:	40%
--	United States:	50%
--	Canada:	60%
--	South Korea:	85%

....considering the time it takes to build new campuses and train new faculty, distance learning is probably the principal solution to this problem of a shortage of skilled workers.

Distance Education is at the center of the new approach to learning. As Arthur M. Harkins has observed, we can now consider that there are four generations of educational paradigms:

- Education 1.0 – Memorization of content
- Education 2.0 – Learning extended through access to the Web
- Education 3.0 – Permits that learners not only consume knowledge but produce it as well
- Education 4.0 – Supports the learner in the production of innovation.<sup>4</sup>

These new strategies for pedagogic and andragogic learning are reinforced by other factors which contribute to the ever-greater importance of distance learning:

- “High Cost of Driving Ignites Online Classes Boom”  
(*New York Times*, 11 July 2008). Gasoline goes to US\$ 4.00.  
80% of 15 million U.S. college students live off campus.  
Enrollments in online courses has grown between 50-114%.
- The State of Michigan, in April, 2006, made it a requirement, to obtain a high school diploma, to have the experience of taking at least one online course (*New York Times*, 30 July 2006).
- The advent of OERs, Open Educational Resources, seems to promise greater access to knowledge and information throughout the world, and to the re-use and re-purposing of content; but it is difficult to predict now how this movement

will truly fare.

There was good news in Brazil earlier this year when the results of the Ministry of Education's 2007 national-level exams testing the knowledge of first-year and graduating college students, yielded surprising data:

- the students who studied through distance learning had better performances than those who studied in conventional classrooms;
- among first year students: in 9 out of 13 academic areas tested, distance learners fared better than those who studied in conventional classrooms;
  - among graduating students: in 7 out of 13 academic areas, distance learners fared better than those who studied in conventional classrooms.

We must not forget that the different regions of Brazil have different socio-economic realities, and differing educational opportunities. There is a total of 2,300 institutions of higher education in the country. Three hundred are designated universities because they meet the requirement of instruction, research, and extension activities. The remainder are "university centers" or "faculties," in which instruction is the only activity. Twenty percent of the total of institutions are public (tuition-free); eighty percent are private (10% religious orientation; 90% for profit).

The types of delivery systems used are:

- Correspondence: 71.1%
- E-learning: 62.9%
- Television: 23.6%
- Video: 45.0%
- Satellite: 11.4%
- CD: 49.3%
- DVD: 37.1%
- Radio: 7.9%
- Teleconference: 12.9%
- Videoconference: 24.3%
- Cell phone: 12.9%
- Others: 10.7%

Largest subject areas studied in DL:

- Administration
- Pedagogy
- Language and Literature

There is strict regulation of distance learning activities in Brazil with regard to formal education (when a course leads to a diploma):

- The Ministry of Education – regulates higher education;
- State Governments – regulate secondary education and some post-secondary technological education;
- Municipal Governments regulate primary education.

ABED's Statistical Yearbook of 2008 showed that in 2007 207 institutions were authorized by the Ministry of Education for distance learning activities and that there were 972,000 post-secondary students enrolled in distance learning courses throughout the country.<sup>5</sup>

Perhaps the principal obstacle to the growth and continued improvement of distance learning in Brazil is the highly conservative posture of the Ministry of Education in the process of authorizing institutions to initiate activities.<sup>6</sup> The Ministry is concerned with the quality of courses, especially those offered by private institutions, and there is some reason for this posture. At best we can attribute it to what can be called the "Greed Factor – or Diploma Mills and Other Shady Business Tactics." At the ICDE 22nd World Conference in 2006, in Rio de Janeiro, Prof. Henrik Hansson, of the University of Stockholm, gave a most interesting plenary address: "Traps, Tricks and Survival Tactics – the Digital Learning Landscape," in which he talked about "false universities" and "false diplomas." He estimated that there were some 1,000 such institutions around the world. Although I am pleased to say that no evidence has yet appeared in Brazil of such phenomena, there are other "crimes," both of academic quality and those related to consumer issues, which are present and which represent serious obstacles.

For example, among the tricks for maximizing profits at the student's expense, practiced by some Brazilian distance learning institutions we sometimes find:

- abridged versions of textbooks (150pp. > 50 pp.)

- printed material, sent to students for study, is lifted out of a manual for using a calculator
- tutors who are not subject specialists
- tutor-student ratio assymetric (1 : 500)
- not enough computers (or other equipment or books) at student support centers (sometimes “pseudo-centers”)
- “interdisciplinary exams” (the same test of 40 questions is given to students from five different courses)

As a Brazilian wit once observed: “The Brazilian is always fighting for the right to not obey the law.” In the first semester of this year, there was reportedly a billboard on a main boulevard in Belo Horizonte, a large Brazilian city, aggressively advertizing a distance learning institution with the following appeal to the pocketbook: “What is more important to you – quality or price?”

As a result of this environment, we are subject to excessive government regulations. Although the country’s Constitution (1988) gives universities autonomy in their academic and administrative practices, in the period 1995-2002 regulations were issued which made it practically impossible for universities to obtain permission to initiate distance learning activities. Even worse, insitutions both public and private were prohibited from accepting the credits and diplomas of students who had earned their degrees in other countries.through distance education. With a change in government in 2002, new laws began to be issued which were less rigid and less confining, but nevertheless there remain legal and procedural obstacles which militate against innovation and creativity in distance learning, and absolutely ignore institutional autonomy. For example:

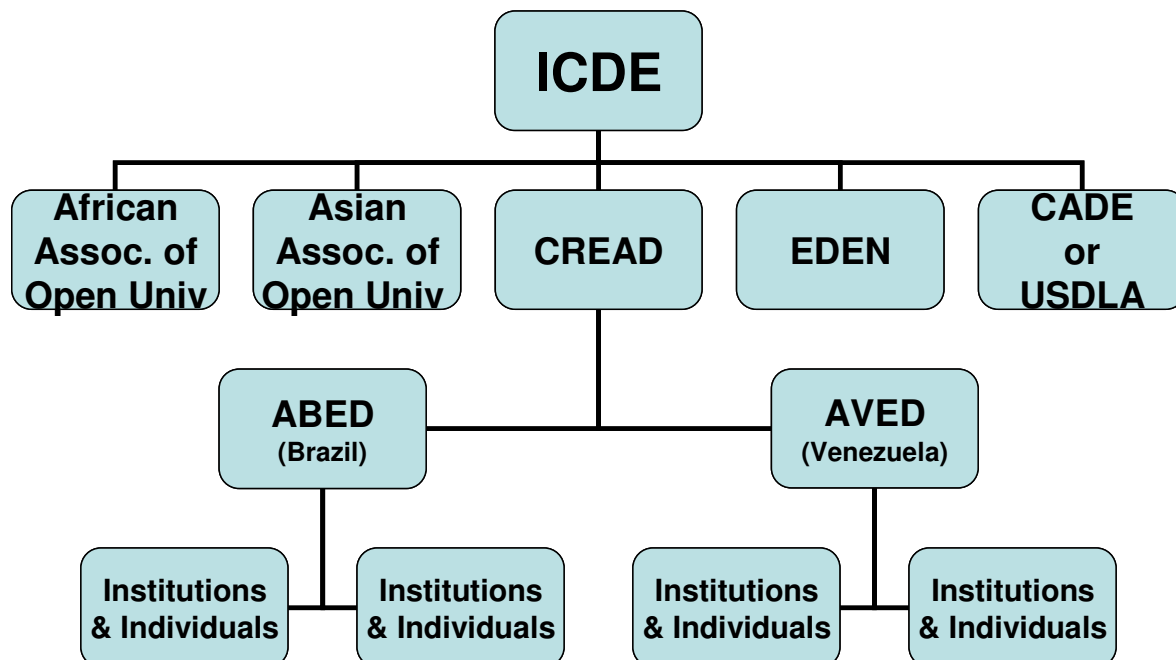
- only 20% of a course can be at a distance
- centers for student support (within 100 km of student residence)
- requiring 10 computers and a physical library of books at student support centers, even when the course is very expensive and all students participating have computers at home;
- final examinations in a course must be face-to-face
- excessive delay for obtaining approval (sometimes + 24 months)

- Ministry evaluators (4,000) sometimes know nothing of distance learning
- Brazil was the last country with a population of over 100 million to establish an “open university” (2006);
- Brazil’s Open University is a consortium of conventional federal universities, and requires passing an exam to enter.

There are still other obstacles to the arrival of the “learning city” in Brazil, among them the question of who will finance free access to wireless broadband, as is taking place in some other nations? For example, I live in São Paulo, one of the largest cities in the world. Twelve million people live in São Paulo’s central area, and 20 million people in the greater metropolitan area. A candidate in the current race for mayor has promised that, if elected, she will cover the central area with wireless services (Wi-fi, WiMAX and WiMesh). But her opponents have estimated the costs of such a promise to be over US\$ 2 billion to install (without user terminals), and operating cost for *one third* of the population to be US\$ 10.00 per month per user, or US\$ 440 million per year, clearly unviable expenses at the present moment. A more viable approach for the learning city, in Brazil, would be to concentrate investments for access in telecenters (free access terminals in public places, of which there are already several hundred in the metropolitan area), schools, libraries, hospitals and government offices, all of them principally oriented towards community services such as e-government, tele-learning, tele-medicine, and tele-commuting.

As we have seen, there are many obstacles to be overcome in order to be able to use distance learning to help construct learning cities. And there is no recipe or prescription to guarantee results. Perhaps the best advice is to think of the children’s game “leapfrogging,” in which the players jump over the shoulders of one another. As John W. Moravec and Arthur M. Hawkins have observed, leapfrogging is a form of “jumping over the obstacles to achieve a goal,” or “to get ahead of the competition or the present state of the art through innovative, time-and-cost-saving means.”<sup>7</sup> For example, with the current structure of the distance learning professional community around the world, it takes too long for an innovation, or a “best practice,” in distance learning to be shared around the world. There is a clear and urgent need for greater and more rapid communication among distance learning specialists. A three-tiered system of

communication (global, regional and local), each tier made up of the institutions and professionals working in the area, would guarantee awareness of new problems affecting the practice of distance learning, and the solutions being found. It would make for a single, vibrant community of practice. The only elements lacking are more national associations and a regular flow of information among all participants.



There are a number of other measures which could be taken to improve and accelerate communication with the professional community.

-- There are some 10-15 scholarly periodicals around the world concerned with distance learning. They are practically unknown in developing countries, principally for reasons of cost. If there were a freely-available online cataloging of the contents of all of these journals, it would promote an increased flow of information and knowledge.

-- There is a need for national, regional and global cataloging of available distance

learning courses, both those officially recognized by government or other bodies, and those which are of an informal nature. This would facilitate student recruiting on a global scale.

- In developing countries there still exists, in many quarters, rejection of distance learning. Hence, it would be valuable, to increase the credibility of distance learning, to have easily available, specially-collected research papers, especially of a quantitative or experimental nature, to be used to counteract measures against distance education.

There is much to be accomplished in the coming years, but the benefits to be gained, both by individuals and society in general, more than justify the efforts.

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<sup>2</sup> Larsen, "Learning cities".

<sup>3</sup> Snowling, Margaret J. and Charles Hulme, eds. *The Science of Reading: A Handbook*. Online Version Wiley Interscience, 2008; see chapter "Literacy and Cognitive Change" by José Morais and Régine Kolinsky. See also: R.W. Harbison and E.A. Hanushek, *Educational Performance of the Poor—Lessons from Rural Northeast Brazil*. New York: Oxford University Press/World Bank, 1992.

<sup>4</sup> Harkins, Arthur M. "Leapfrog Principles and Practices: Core Components of Education 3.0 and 4.0," *Futures Research Quarterly*, 24:1 (Spring, 2008), 19-31.

<sup>5</sup> Litto, Fredric M. "Public Policy and Distance Learning in Brazil," in Terry Evans, Margaret Haughy, \_\_\_\_\_ and \_\_\_\_\_ David Murphy, eds. *International Handbook of Distance Education*, Bingley, UK: Emerald Group Publishing., \_\_\_\_\_ 2008; \_\_\_\_\_ pp. 671-684

<sup>6</sup> For a historical account of the background of Brazilian legislation regarding education, and particularly distance education, see Fredric M. Litto, "Public Policy and Distance Learning in Brazil," in Terry Evans, Margaret Haughy, and David Murphy, eds. *International Handbook of Distance Education*, London: Elsevier Ltd., 2008.

<sup>7</sup> Moravec, John W. "Technological Applications of Leapfrog," *Futures Research Quarterly*, 24:1 (Spring, 2008), 59-67.

## **La Educación a Distancia como un Factor Clave en la Alfabetización en la India**

(Distance Education as a Key Factor in Building Literacy in India)<sup>11</sup>

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*India, el país con la mayor concentración de población joven en el mundo, tiene 380 millones de analfabetas. La Doctora Mujumdar está convencida de que la educación a distancia supera tantas barreras, incluso la del analfabetismo. Para problemas como ese, hay que aprovechar la tecnología, que es uno de los componentes fundamentales para un sistema de educación a distancia y en línea.*

*A su vez, la tecnología es una vía a través de la cual puede masificarse la educación y ofrecer igualdad de oportunidades. Sirve para distribuir educación para todos, eliminar barreras de edad, nacionalidad, género, casta, credo y religión. Asegura además la transferencia rápida de información así como un mayor alcance, permitiendo además la continua renovación de contenidos y asegurando la relevancia de la educación.*

### **INTRODUCTION**

I have chosen to speak today on Distance Education as a key factor for building literacy in India. I will also touch base upon the use of ICT as an important factor in this system as I am a great advocate of the use of modern technology in distance education and am convinced that in the next two decades or so the pattern of education will undergo a revolution because of increasing use of technology, and also new innovations in this field. Though my thoughts are based on Indian conditions, they may be relevant, to most of the other developing countries too especially from the South East Asian region.

Shortly we shall complete the first decade of the 21<sup>st</sup> century. Tremendous economic, scientific and technological development has taken place in the last 200 years all over the world;

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nevertheless a large mass of humanity still lives a poverty-stricken life. Ignorance, malnutrition and disease have severely affected human endeavor. Global warming is no longer a myth and is staring darkly at mankind. Unless some drastic and imaginative steps are taken by the right thinking people all over the world, the problem of poverty, socio-economic divide and deprivation will continue to plague us throughout the new century. It may create a set of new socio-economic problems which may further accentuate poverty and deprivation. In this address I have chosen to examine the role of distance education in building literacy as well as its role in the economic development of India, mainly because of the availability of the relevant data.

India is an important country in South Asia. It comprises 28 states and 7 Union territories and has a federal political structure. It is one of the less developed countries of the world, with the per capita GNP of only US \$ 740. Its population is estimated at 1.12 billion which is more than 17 percent of the world population, though it accounts for only 2.4 percent of the world's surface area. Thus, a highly adverse land: man ratio is a special characteristic of this country. India will also become within the next 20 years a country with the youngest population.

## **LITERACY, EDUCATION AND HUMAN RESOURCE DEVELOPMENT**

The discussion so far would bring home two important economic characteristics: first, the country is economically very poor; second, the country is plagued with illiteracy and the quality of the labour-force is far below the standards of the developed countries. The labour not only lacks in the skills necessary for the available jobs but, being illiterate, also the capacity to acquire new knowledge for better jobs.

UNESCO defines an illiterate person as one who cannot, with understanding, both read and write a short, simple statement on their everyday life. Indian was ranked 147<sup>th</sup> out of 177 countries measured for literacy by UNESCO.

I am now quoting some data from a recent article by Subodh Varma in the Times of India mentioning some shocking yet realistic facts and figures related to the education scenario in India - In 1961, only about 28% Indians were literate while in 2006 the estimates put literacy at about 66%. This is truly an appreciable jump in literacy rates; however over 380 million still remain illiterate. That is the largest number of illiterates in any country. The total number of children in the

age group of 6 to 24 years is about 460 million. Only about 63% of them are actually studying. Over 170 million or about 37% potential students have been left out of the opportunities of education. Experts and policy makers offer many reasons why so many have been left behind by the country's education system. Although poverty is one of the major reasons why youth and children quit studying to start working there are four great divides which pervade every aspect of life including education in India – they are – the gender divide, the rural-urban divide, the rich-poor divide and still prevalent caste divide. In each case there is a disadvantaged section, which finds it difficult to have access to educational and employment opportunities and thus gets left out. Thus one finds lower literacy rates, higher drop out rates and lower enrollment ratios amongst agricultural labourers, tribal women, scheduled castes and such under-privileged.

The 11<sup>th</sup> Plan is termed as “India's Educational Plan.” It places highest importance on education as a centered instrument of achieving rapid inclusive growth. Education and skill development are at the core of our government's Plan. The Indian Government's 11th Five Year Plan for the country has a significant emphasis on both education and ICT. Today there are 378 Universities, 18064 colleges, 4.92 lakh teachers and almost 140 lakh student enrollments in higher education, making the Indian higher education system as one of the largest in the world. There are 23 Central Universities, 216 State Universities, 110 Deemed Universities, 11 private Universities and 38 institutions of national & state importance in India. The Government plans to setup 30 new central universities, and several additional colleges in order to achieve the gross enrollment ratio in higher education from the present 11% to 21% by 2015. The government has pledged to raise public spending on education from the present 3.6% to 6% of GDP. Education has a 19.4% share in the total plan outlay - by far the largest and much more than earlier years. The plan focuses on raising the literacy from present 66% (in 2006) to 80% in a ten year span. These targets seem difficult if not impossible.

The Indian government's plan also highlights on “inclusive growth”. As I mentioned earlier many sections of our society have been left out of growth that India has achieved in recent times. The rates of poverty and illiteracy are higher among the under-privileged and backward sections of our society as compared to the affluent sections. Women, backward class, rural, minority and tribal groups are some of those which have not received participation in the growth of our country and as a result have not received all those opportunities that have benefited the larger sections of our

society. The literacy rates amongst these classes are even lower than their urban counterparts. The 11<sup>th</sup> Five Year plan has laid out guidelines and policies to focus on this inclusive growth which will enable participation of all sections of our society, in the growth process, irrespective of class, creed, gender, race and geographic location.

## **DISTANCE EDUCATION, WHAT IT IS AND WHY**

In general, distance education can be defined as the system of teaching by someone who is removed in space and time from the learner. Use of different types of media besides the print is an essential part of distance education. Though the teacher and the learner are separated, and the learner is often an individual who learns in his own place and at his own pace, the distance education system also envisages some sort of a two-way communication. Fortunately tremendous advancements in science & technology including the satellite based communication technology, have now made this possible. Student support services through electronic networking have been adopted by many institutions.

Fair and equitable access to education has been the main objective of the education system in most of the civilized countries. However, in large countries like India whose geographical conditions are such that small human habitations are dispersed far away from each other, equity in access to education has posed serious problems in extending the traditional systems of education. It is not only the physical infrastructural facilities but also the human resource in the form of teachers, which have posed a serious constraint. The potential of distance education to promote universal access to education and build literacy has been realized now and governments across the globe are looking at it more seriously. The system is also capable of providing a second chance of education to those who are eager for it. It is also capable of providing orientation and refresher courses to those already gainfully employed and also those who wish to acquire knowledge in fields other than their own. Thus distance education can provide education at various levels i.e. to the illiterates, the semi-literates, the skilled and technical workers and even those who are already well-educated and employed but wish to venture in newer fields.

## **DISTANCE EDUCATION – LITERACY AND ECONOMIC DEVELOPMENT**

The two major reasons for illiteracy in India are the dramatic growth in population vis-à-vis the number of available schools and the tendency of families to take their children out from school early to serve as breadwinners. In case of the girl-child, the families often take them out from school to serve as a helping hand at home or on the farm.

Although India has one of the largest primary education systems with 150 million children enrolled, 37% drop out before the 5<sup>th</sup> grade.

There is no single effective solution to this problem. However, some of the possible solutions could be:

1. Increasing the number of schools at a much faster rate
2. Getting good trained teachers
3. Adopting to ODL system for mass education

Increasing the number of schools so as to match the rate of population growth is an extremely difficult if no impossible solution (it would mean opening a new school every day for next 10 years). Good teachers are in general a scarce resource, coupled with the problem of teachers training to ensure quality.

The ODL system as a tool for mass education is indeed worth mentioning. Distance education can provide excellent *non-formal* education to millions of people living in rural areas of the under-developed world; this would involve use of the multi-media system especially the electronic system like audio-video educational facilities. Non-formal distance education can be used not only for imparting basic skills, knowledge and training but also for spreading knowledge of ways and means of raising productivity in rural occupations like agriculture, animal husbandry, forestry and fishery. It can be also be used for promoting important messages about health, population control, hygiene etc. The appropriate use of distance education coupled with efficient systems and technology can indeed bring about major changes and improvement building literacy especially amongst the poor, underprivileged and rural children and youth.

It has been seen that in large countries such as India, one of the major drawbacks in the education system in rural and remote areas is the non-availability of good teachers. Distance education system can also provide training to teachers at a massive level through the use of ICT

while at the same time it can reduce the dependency on teachers for achieving learning. In a country such as India, where the teacher is a scarce resource, distance education coupled with innovative ICT solutions can create a model of education delivery and learning where the need for a teacher is reduced, if not eliminated. Online learning via WBT's, CBT's, laptops in local languages are classic examples of this type of a model if appropriately woven into the learning and education system.

In the field of formal education, distance education has indeed unlimited scope. Distance education can be used for imparting basic knowledge to those who have missed the primary education system in the conventional way. Distance education has an all absorbing role to play in liberal education, skill oriented education, vocational education, higher education and even scientific and technological education for adults who have not had a chance to learn them formally. Fortunately, most of the developing countries have by now started using distance education mode at the secondary and tertiary levels. Open Schools and Universities have also been set up in these countries. Universities have done a fantastic job of educating millions of children, youth and adults from all strata of our society.

## **NEW TECHNOLOGIES AND DISTANCE EDUCATION**

The education that developing nations desperately need is one which equalizes the opportunities for the poor and the disadvantaged, acts as a system of mass education and which generates employment opportunities thus raising the livelihoods of millions of people. New technologies can help distribute education from the world's best sources to all the people irrespective of age, sex, creed, religion, socio-economic status, etc. who are in need of education, thus crossing all geographical and social barriers. New technologies, namely satellite communication, fiber optic cable, computers, internet, wireless and the web have dramatically enhanced educational capabilities. Technology has allowed faster delivery and continuous updating of content in order to enhance quality, reach and application.

Fortunately, the world at large has seen tremendous developments in the field of science and technology, and education technology has not remained far behind. The emergence of the information technology in the field of education has brought about a revolution. This revolution has in a way removed the barriers of classroom learning.

The governments of most developing countries are today fighting to provide this equitable access to ICT for all segments of society. It would be apparent that unless the less developed countries are able to create an appropriate technological infrastructure to support the kind of learning needed in the 21<sup>st</sup> Century, they would be left far behind. The need of 21<sup>st</sup> Century will be to exploit the information and technology revolution to the fullest possible extent. Economic development will depend to a large extent on creating and optimally using the technological infrastructure. Countries which would harness the power of multimedia communication for education and training purposes may be the economic powers of the present century.

It has been found that students who often do not perform well in conventional examination systems demonstrate high success levels in the use of IT and IT-enabled learning. IT is now being looked at to provide new directions in pedagogical practices. An amount of Rs. 5000 crores is being provided during the 11th Five Year Plan of Government of India in order to provide ICT infrastructure in schools. Under this program each school will be provided with at least 10 computers, a server, a printer on LAN and broadband internet connectivity of 2Mbps. Training of teachers in the use of ICT for classroom learning will be an important component of this initiative. A number of steps have been taken for leveraging ICT at the higher education level.

### **EXPERIMENTING WITH NEW TECHNOLOGY AT SCDL, PUNE**

Symbiosis Center For Distance Learning has been offering blended learning programs since 1994. Our programs are extremely popular as they meet the market needs and provide employment and career advancement opportunities to thousands of youth from India and over 42 different countries. Our curricula is constantly upgraded and quality is our prime focus. At the Symbiosis Center For Distance Learning, we realized the importance of ICT in education long back. Since 2004 especially we have focused significantly on implementing technology solutions which will increase access to education, improve quality, provide fast response to student queries

and provide better student support services. We are the only educational institute in India to have a “paper-less” office and a dedicated student call center. Each student call including grievances are tracked for call history and carefully monitored for quality of response by trained professionals. We also house a “communication center” which answers student queries sent via email and guarantee a response of 1 business day. Technology has not been used to in its simplest form yet used appropriately and effectively. Rather than spending on costly software, we have focused on implementing cost-effective, simple yet efficient systems which have benefited our students tremendously. We track the complete details of each of our student right from enrollment to graduation thereby ensuring fast and accurate resolution of student issues. Technology has been used effectively in order to achieve this. Today, our students can track their own dispatches on the web site rather than calling the institute; they can submit assignments online and appear for an examination at any time 365 days of the year at their choice of location. Our students can access all the learning facilities such as e-learning, faculty chat sessions, exam booking, academic performance etc through our sophisticated web portal and thus feel a part of a large virtual campus created by appropriate use of ICT. Our institute has thus gained significant reputation and popularity not only for offering high quality education, but also for bringing out innovative student support services with appropriate and effective use of modern technology. This has infact been one of reasons for our exponential growth from a mere 8000 students in 2001 to an overwhelming 200,000 student strength in 2008.

## **CONCLUSION**

By way of conclusion, I can only say that those of us actively involved in providing distance education to a large number of learners are greatly helped in our mission by the advent of new technology in the field of education *per se*, and distance education in particular. The new technological devices like the computer, internet and the web have greatly enhanced our reach to the disadvantaged sections of our community; the snag, however, is that many of them have still no access to the technical devices to derive the full benefit of distance learning. I am optimistic that in the coming 5-10 years, technology will penetrate down to the smaller villages and hamlets of our great country, empowering all our people to benefit from the country’s economic growth and enabling us to achieve higher literacy rates while providing education opportunities to all

sections of our society irrespective of class, creed, race or gender. Let us all set forth with this optimism and dreams to eradicate illiteracy, poverty and discrimination. Let us today pledge to take education to every nook and corner of this world and bring into its folds all those especially the under-privileged who are desirous of seeking knowledge but have been left behind in this race of economic development and growth.

## Conexiones Globales – Impactos Locales

### Oportunidades y Retos para la Educación Abierta y a Distancia Transfronteriza

(Global Connections – Local Impacts, Opportunities and Challenges for Cross-Border Open and Distance Learning)<sup>12</sup>

Dr. Don Olcott, Jr

Presidente del Observatorio de Educación Superior Sin Fronteras (OBHE)

*Las nuevas tendencias hacia una globalización de la educación van orientadas hacia la búsqueda de diversificación de financiamiento, la adopción del inglés como lenguaje global, la movilidad internacional de estudiantes para educación superior y encontrar un empleo. Además hay una cada vez más alta demanda de países desarrollados y en vías de desarrollo que buscan transferencia de tecnología y colaboración en el sector de la investigación.*

*La reducción de presupuesto en educación superior ha conducido a buscar nuevas modalidades de aprendizaje. A pesar de ello, el 75% de la educación superior de la educación transfronteriza es ofrecida en formatos presenciales y no a través de la tecnología. ¿Por qué? Uno de los retos es que la tecnología no es neutral culturalmente, hay aún muchos retos pedagógicos como la lengua y la cultura. Pero aquellos retos también se presentan en la educación presencial y poco a poco han sido superados, por lo que en la educación a distancia, las soluciones también pueden hallarse. Para ello se necesita preguntar a quienes menos se les consulta acerca de estas modalidades y quienes al fin y al cabo son los sujetos más importantes: los estudiantes.*

My comments today will address some of the trends, opportunities and challenges we face in global open and distance learning. I will share with you at the outset that I do not have all the answers, in fact, I don't even know all the key questions.

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<sup>12</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo.

What I do know, is that we, as ‘global colleagues,’ can explore these issues together, engage in insightful discussions, and through these dialogues, perhaps, be enlightened about our own views and biases towards global higher education. Liang Qichao (1919), nearly a century ago, inspired us all about the human, social and cultural potential of a global community. From *Impressions from my European Journey*, he wrote:

‘Our nation has a great responsibility . . . to enrich our culture with Western culture and to enrich Western culture with our culture, so that they may fuse into a new culture.’

We can also enrich our collective understanding of open and distance learning by sharing together as global colleagues.

### **Access: The Global Challenge**

A major catalyst for the growth of global higher education has been the complex issue of educational access. It has been estimated that by 2010 there will be 100 million people in the world fully qualified to move from secondary education to tertiary education for which there may be no access. So here’s an interesting question. Indeed, if this forecast is true, then why is global competition for students growing so rapidly?

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The answer, of course, is that even if these estimates are remotely accurate, these qualified students do not return to university at the same time or with the same goals. How will we serve these students? Is open and distance learning the solution? We will come back to this question.

### **Going Global: The Driving Factors for Universities**

What factors are driving universities into the global higher education marketplace? First, is the underlying premise that a nation’s economic infrastructure in the global marketplace is inherently

dependent upon establishing global partners, attracting qualified students and workers with high-need skills, and establishing higher education linkages to world class research, technology transfer, academic programmes, and global business enterprises.

Secondly, many universities are going global to attract alternative sources of revenue to support both domestic and foreign endeavours, including internationalizing their curriculum to ensure graduates are prepared for living and working in a global society.

Thirdly, the growth of English as the global language for commerce is serving as a catalyst for universities to expand their international linkages and more universities are now offering programmes, particularly at the post-graduate level, in English to attract international students. International student mobility is shifting rapidly and more students are completing part of their education while studying abroad.

### **Trends in Global Cross-Border Higher Education**

Today, host nations are becoming more selective for approving and selecting foreign providers to offer programmes in-country. At the same time, we are seeing unique public-private partnership models develop between government, business, and universities that are designed to meet specific needs within the host country. For example, these programmes may be training mid-level public managers, creating professional development for engineers, or offering high level English language training programmes for business personnel.

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My main point is that host nations are becoming very selective about the types and levels of programmes offered by foreign providers. As I mentioned earlier, these partner linkages are designed to strengthen internal economic infrastructure, provide high-skills training for the workforce, and enhance the host country's higher education system.

**Emerging Hosts and Sources** - This graphic provides you with a general matrix of international cross-border activity. *Host countries* are those that approve foreign providers to deliver programmes in-country. *Source countries* are those that deliver their programmes globally to other countries. You will notice that historically the US, UK, and Australia have been the major source countries. Conversely, China, India, Malaysia, Singapore and the Gulf States have been the major host countries over the past five years. This, however, is changing. China, France, Germany, India, Malaysia, South Africa, Russia, are becoming emerging source nations and delivering programmes externally.

### **Defining the Global University**

As many of you know, the growth of international higher education has raised a fundamental question: *What does it mean to be a global university?*

Does offering a programme in a foreign country define your institution as a global university? If your faculty' teach online distance learning students from ten foreign countries, does this make your institution a global university?

Indeed, I cannot offer you a definitive answer to these questions. One view is that each institution must define its own global characteristics. Another approach, similar to the World University Rankings, is that universities should be judged on specified criteria that define (or doesn't) their institution as a global university.

For example, is your university known globally for its programmes, academic quality, research, partnerships, and global experience? Is your university engaged in innovative global research that impacts global issues and policy formation? Does your institution have diverse and proven global partnerships? Is your institution a global campus as well as a global provider?

Is there a continuous flow of foreign scholars and international students to your campus and is your university offering programmes globally?

As we have seen, the global higher education market creates many interesting and complex questions for us to consider. My comments thus far have focused on giving you a generic picture of the global higher education landscape. I will now address my comments to the role of open and distance learning in this global market. However, first I would like to invite any questions you may have.

### **Global Distance Learning (Ad) Ventures**

What are the goals of your distance learning programme and strategy? It is a truism that if you don't know where you're going, it won't matter which path you take. Moreover, if you don't take the necessary time to plan then you will be embarking on a distance learning *adventure* rather a sound, well developed open and distance learning venture.

So let me set the context for my subsequent comments. We have seen significant developments in global communications technologies over the past ten years. These have served as the catalysts for the exponential adoption of open and distance learning by universities, faculty, students, and the public for delivering higher education locally, regionally, and nationally. So given all this progress in technology and delivery potential, consider this question.

Why is 75% of global cross-border higher education delivered in face-to-face formats?

### **Barriers to Global Distance Learning**

Indeed, I acknowledge this percentage is a general estimate, but certainly a large majority of international higher-education is being delivered on-site in face-to-face formats. Perhaps one reason is that countries that are spending considerable money for outside programmes, research and tech transfer perceive that having 'real people' in-country enhances quality and credibility.

Another potential barrier to global distance learning may be related to the pedagogical challenges of addressing the interconnected impacts of language, social norms, and cultural issues of open online teaching and learning. Moreover, these issues may be exacerbated if students are taught in English rather than their native language.

Technology is not culturally neutral. Can technology be perceived as a threat to one's culture? Does not English bring with it cultural overtones that may be perceived as 'cultural and linguistic imperialism' by native students and educators? The answer is a resounding yes, sometimes.

Distinguished colleagues, open and distance learning must address the issue of access to the basic technologies and infrastructures necessary for effective teaching and learning. The digital divide is a reality, it is not fiction. There are diverse and often highly divergent levels of technology access between regions, nations, cultures, urban and rural communities, public and private education, and others.

### **The Cultural Imperatives**

So how do we reduce these barriers to open and global distance learning? From a curricular standpoint, we must do better research on the core cultural, social and linguistic traditions of the host nation. We need to build stronger regional partnerships where there may be common cultural, social and language histories and traditions. And we must ask ourselves, what can our global students teach us? Yes, they are students, but they are also a resource to help us understand what the major obstacles are to global open and distance learning.

### **Strategic Considerations for University Leaders**

Indeed, this commentary suggests that university leaders must address a number of key leadership and strategic issues. How do global distance education initiatives align with institutional mission and strategic goals? These initiatives should strengthen your university and enhance its

capacity to provide quality education to students. Going global simply because other universities are pursuing these global markets, does not address the above question. Global open and distance learning must align with the mission of your university.

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At the programme level, distance teaching must be aligned with instructional design formats that compensate and respect language, culture and social norms of foreign students. How do we create the most effective and culturally sensitive curriculum for our foreign students?

University leaders must also develop a risk management strategy for major international distance learning initiatives. What do I mean by this? Leaders must develop a strategy that allows the university to transition out of and end a partnership that is not working. It is interesting how quickly universities can often create partnerships and yet perplexing how long it often takes to end partnerships that are not successful. Sometimes, university leaders must cut their losses, learn from the process, and prepare for future partnerships.

### **The Global Future for Distance Learning**

In conclusion, the global distance learning market will grow significantly over the next decade. There will be unique international opportunities for creative and flexible universities who can leverage their resources, human and fiscal, to address many of the barriers mentioned today. We must keep our focus on effective teaching and learning . . . we must keep our focus on students.

If there is one lesson I have learned it is that technology is, in and of itself, simply a tool for teaching and learning . . . nothing less, nothing more. Education, and more precisely, quality education, is the manifestation of dialogue and interaction among and between students and

teacher. It is the interactive and reflective communications between students. And it is the dynamic interaction between the student and the intellectual content.

These are the processes that transform learning environments for teachers and learners alike. When we use technologies to enhance these learning environments we also facilitate the creation, analyses, and dissemination of knowledge rather than just the flow of information.

**Educación sin fronteras: Rompiendo barreras hacia el aprendizaje virtual y la efectiva creación de redes**

(Borderless education: Breaking down barriers through e-learning and effective networking)<sup>13</sup>

Dr. Anuwar Ali

Presidente de la Universidad Abierta de Malasia

*En años recientes, ha habido un crecimiento sobresaliente en la educación sin fronteras debido a la internacionalización de instituciones de educación superior, el uso de las tecnologías de la información y la comunicación (TIC) y al aumento de la demanda internacional para ingresar en la educación superior.*

*La democratización de la educación solo puede ser posible si somos capaces de proveer más educación para más población.*

*Abstract*

*In recent years, there has been an impressive growth in borderless education primarily due to the following reasons: the growing imperative of higher education institutions to internationalise, the preponderance of ICT and the rapid growth in worldwide demand for education. This has led to very active discussions on this subject from both the perspective of the developed and developing nations, each trying to evaluate the benefits and costs of adopting such an education.*

*Based on the experience of Open University Malaysia (OUM), the first ODL university in Malaysia, I believe that developing countries do have the capability to harness ICT and other technologies for their human capital development to break down barriers that impede their socio-economic progress. An equally important endeavour towards this end is via developing effective networking particularly among countries in a similar stage of economic development.*

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<sup>13</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo.

*In this paper, I will share on how OUM has effectively leveraged the e-learning component of its blended delivery mode. More specifically, the paper will discuss the e-learning practices at OUM, the challenges that we face and how we seek to overcome them. I will also share OUM's efforts in developing and fostering strategic networking with other similar organisations in the region, the outcomes of which have been rewarding to all parties concerned.*

*The paper concludes with a firm belief that through a well-coordinated effort in e-learning and effective networking, ODL and other higher education institutions in this region will be able to galvanise our resources to fulfil common goals in providing quality education to all.*

## 1. INTRODUCTION

In recent years, there has been an impressive growth in borderless education primarily due to the following reasons: the growing imperative of higher education institutions to internationalise, the preponderance of ICT and the rapid growth in worldwide demand for education. This has led to very active discussions on this subject from both the perspective of the developed and developing nations, each trying to evaluate the benefits and costs of pursuing borderless education.

What is *borderless education*? The term 'borderless education' is used to describe educational provision that crosses conventional boundaries of time, space and geography (Cunningham et al., 1998). According to UNESCO/OECD Guidelines on Cross-Border Higher Education, "*Cross-border higher education includes higher education that takes place in situations where the teacher, student, programme, institution/provider or course materials cross national jurisdictional borders. Cross-border higher education may include higher education by public/private and not-for-profit/for-profit providers. It encompasses a wide range of modalities, in a continuum from face-to-face (taking various forms such as students travelling abroad and campuses abroad) to distance learning (using a range of technologies and including e-learning)*" (UNESCO/OECD, 2005).

Based on the definition by UNESCO/OECD above, borderless education encompasses a myriad of higher education institutional establishments ranging from corporate universities, overseas branch campuses, open and distance learning (ODL) institutions and virtual universities.

## 2. *GROWTH IN BORDERLESS EDUCATION*

Borderless education is one of the offshoots of the globalisation process. It is thus helpful to trace the factors that had led to borderless education in the context of globalization. The World Bank (2002) lists four significant trends in globalization:

1. The increasing importance of knowledge as a driver of growth in the context of the global economy;
2. The information and communication technology (ICT) revolution;
3. The emergence of a worldwide labour market; and
4. Global socio-political transformations.

The drivers behind borderless education are strong and will continue to strengthen. They include (Bjarnason et al., 1999):

1. Technological developments;
2. Enhanced interest in lifelong learning in work;
3. Widening participation and encouraging access to post-secondary education;
4. Huge increases in the international demand for higher education; and
5. General introduction of market mechanisms into the public sector.

## 3. *BARRIERS TO BORDERLESS EDUCATION*

Notwithstanding the tremendous growth in borderless education as mentioned above, there exist considerable barriers to it particularly for adult learners:

1. Working adults are very busy with *many commitments*. As a result, they may not have the time to attend too many face-to-face interaction sessions.
2. Democratisation of education can only be fully realized when we provide education to as many people as possible. Thus, we need a delivery mode that has the *ability to reach out to the masses*.
3. Modern adult learners require *personalised learning support and high degree of interaction*. Our education system must be able to provide adequate support to address this issue.
4. Another factor that contributes towards mass education is *affordability*. Presently, the conventional mode of education is generally not cost-effective because of huge physical infrastructure requirements.
5. Today's learners expect learning content to be rich in *multimedia* which the traditional mode of delivery is not able to offer.
6. For more effective learning, learners need to be able to *access to a wider range of references which are accessible at anytime and anywhere*. A conventional resource centre such a physical library cannot fully address this requirement.

As I had explained above, the conventional form of education, whereby students of a particular age group go to college or university full-time for a few years do have some obvious limitations in overcoming barriers to borderless education. On the other hand, I believe that e-learning using ICT and other appropriate technologies can help overcome these teaching and learning barriers. This is also important in countries which promote the democratisation of higher education, whereby the need to increase the supply of qualified and highly-skilled manpower has become an important policy initiative in economic development.

#### 4. *E-LEARNING AND BORDERLESS EDUCATION*

Since the beginning of the internet from the US military-related scientific research (Hart, Reed & Bar, 1992), higher education institutions have been a heavy user of information technologies and have long been one of the most 'wired-up' institutions of our community. A combination of 'push' factors from media networks, especially hardware and software companies and 'pull' factors from university staff at various levels who recognised the potential of information and communication

technologies (ICT) led to increased interest in the scope for convergent media technologies, such as the Internet and broadband cable and satellite broadcast. The developments brought about by technology allow for new possibilities. We are seeing trends in education toward distributed, collaborative models of learning. Agency is shifting from centre to periphery, from teacher to learner, from author to reader, from librarian to researcher, from curriculum to context (Ryder & Wilson, 1996).

Based on the experience at Open University Malaysia (OUM), the first open and distance learning (ODL) university in Malaysia, I believe that developing countries do have the capability to harness ICT as well other technologies for their human capital development to break down barriers that impede their socio-economic progress. In that context, I would like to share with you the efforts made by OUM in leveraging on ICT and other technologies in delivering education in an ODL environment.

## 5. *NETWORKING AND BORDERLESS EDUCATION*

There are many barriers that may prevent adult learners from embracing lifelong learning. Collaboration among educational institutions through strategic networking will help to overcome some these barriers. These collaborations may be in the following areas:

- Joint content development;
- Joint research;
- Joint conferences;
- Sharing of best practices;
- Exchange of learners;
- Exchange of staff; and
- Joint programmes.

## 6. *OUM AND BORDERLESS EDUCATION*

OUM was established in August 2000 as a response to the Malaysian Government's call for the democratisation of education. This catchphrase refers to making education affordable, accessible and available for everyone. To achieve this, a simple yet powerful motto was formulated which served as a source of inspiration and motivation for us – University for All. Using this motto as our primary driver, OUM seeks to provide Malaysians a lifelong opportunity to pursue higher studies. The emergence of OUM was akin to giving a second chance to people who had missed out on higher education earlier.

OUM started out as an experiment to set up an efficient ODL provider of higher education programmes in Malaysia. It is a unique model, established as a private university under a consortium owned by 11 Malaysian public universities. It utilises the expertise of both the academic leaders of these public and other universities and the captains of industry to help develop its academic programmes.

As an ODL institution with a mission to educate the masses, OUM learners benefit from three things at OUM—flexible entry requirements, a learner-friendly flexible academic system and a blended learning pedagogy.

The blended learning approach employed at OUM is a boon to our learners. Through this approach, lessons are delivered to our learners using various modes. We have print modules, an online learning management system (myLMS) and face-to-face tutorials. This approach allows flexibility in the learning process, thus proving to be a big help to those who cannot afford to attend classes full-time due to family and work commitments.

The modules are produced with the help of a pool of subject matter experts (SMEs) who provide the content. These modules are then complemented with face-to-face sessions or tutorials at 61 learning centres situated in major cities and towns of the country. More than 7,000 tutors nationwide, from both public and private universities, have been specially appointed to conduct these tutorials.

The third element in this approach is the use of an internally developed e-learning platform called myLMS. This is a comprehensive and flexible e-learning system that enables lecturers and learners to interact in a virtual classroom environment and at the same time allows the institution to monitor learning and teaching progress. Through myLMS, learners can participate in online discussions and forums with their tutors and peers.

I am pleased to inform that myLMS has won several awards, locally and internationally. Among them are, “Runner-up for the Asia Pacific IT Award” from the Asia Pacific ICT Association, Kuala Lumpur, in October 2006; and “E-learning Recognition” from Eszerhazy Karoly College of Hungary. The latest achievement was the “Award in Excellence in Education Management” from Technology Business Review, Kuala Lumpur, in October 2007. Several local public universities have also purchased and used our learning management system, myLMS.

When classes first began, the number of learners and programmes was small. There were only 753 learners in August 2001 enrolled in 4 programmes. As a result of sheer diligence, commitment as well as increasing community awareness of ODL, we have succeeded in drawing over 75,000 learners to study in 51 programmes in the current session with 11 more to be offered in the next academic year.

Currently, OUM has 10 state and 51 local learning centres situated in every part of the country. Thus far, we have developed more than 500 modules using the expertise of subject matter experts primarily from public universities. As of our Sixth Convocation at the end of August this year, we have graduated more than 13,000 learners from our diploma, bachelor and master programmes.

Our learners come from varied backgrounds. They are teachers, civil servants, homemakers, corporate sector employees, members of the armed forces, nurses, retirees and the disabled. As Malaysia is a multi-racial country, our learners are from various ethnic groups as well. We have also broken the age barrier, drawing those in their 20s up to those in their 60s and 70s.

One of the most significant e-learning achievements was our completion of the e-learning project in the Kingdom of Saudi Arabia, where we provide consultancy services to its Ministry of Higher Education (MOHE, KSA) to establish a National E-Learning Centre (NeLC) which will become a national hub providing e-learning solutions for all the universities in the kingdom. MOHE, KSA has chosen OUM's internally developed myLMS as the learning platform for NeLC. The acceptance of myLMS locally and internationally will further strengthen OUM's position among the top ODL institutions in providing ICT solutions and e-learning.

Another of our ICT achievements, our digital library, currently holds 23 multi-discipline online databases, comprising e-books, e-journals, e-dissertations and e-newspapers. The library has more than 52,000 e-books and 22,000 e-journals, making it one of the largest online resources in Malaysia. This impressive collection is easily accessible online from anywhere in the world.

For a relatively young institution, I would say we have come a long way. OUM's myLMS has not only benefited our staff and learners but those outside of the campus community as well. Besides making our mark on home ground, through OUM International which was recently launched by our Honorable Minister of Higher Education, we have also ventured overseas. Our Centre for Graduate Studies has international learners in Yemen, Indonesia, Singapore and Bahrain. They are enrolled in our MBA, MIT and PhD programmes. Early this year, OUM held its first international convocation for its graduates in Bahrain. Eighteen graduates received their MBA scrolls from Bahrain's Minister of Education. On the local front, we have a number of learners from 16 countries. Our undergraduate programmes have also expanded their wings to Maldives in May this year.

As mentioned above, e-learning is one of the mechanisms that can contribute to break down barriers in borderless education by providing greater access to education to the people. In fact, our experience at OUM has shown that e-learning can further enhance the quality of teaching and learning by providing learner-learner and learner-teacher interactivity, thereby enriching the entire learning environment. At OUM, the objectives of e-learning are:

- To enhance learner access to learning materials;

- To improve delivery efficiency by increasing the opportunities for collaborative learning and by making available course materials 24 hours a day and 7 days a week; and
- To improve learning effectiveness by encouraging learner interaction with tutors and course-mates to support and promote collaborative learning.

I am glad to inform that the implementation of e-learning has been very well received by our learners. This is evident by the tremendous increase in the use of our digital library and myLMS by our learners. The use of digital library has increased almost 10-fold from 61,659 hits in 2003 to almost 600,000 hits in 2007. Our learning portal, myLMS registered more than 40 million hits in the first half of 2008.

An Important-Satisfaction Survey conducted at the university has also indicated that the ratings in term of the importance and satisfaction for e-learning have improved significantly over the years. Our learners' readiness in e-learning is rather high; over 50% and in some cases 75% are competent in using the various ICT tools in their learning. Their positive perceptions on the use of ICT in learning has a mean value of 3.2 out of 4 which clearly indicates that they are appreciative of the advantages that ICT can bring to their learning. In this regard, I believe that e-learning, appropriately implemented, would be a boon to the learners in other institutions as well.

## 7. *MOVING FORWARD*

To move forward, higher education institutions worldwide need to unite under one common purpose to collectively promote borderless education. We need to have mechanisms that allow for organized, systematic and regular sharing, networking and exchange of knowledge and skills. There is an urgent need to embark on long-term and sustainable cooperation. For the Asian countries, in particular, we need to emulate the efforts of the European Community in establishing sustainable collaborations among our Asian countries.

We need to give priority to collaborating with other open universities in order to share and learn from each other's experience. Our recent visits to Sukhothai Thammathirat Open University

(STOU) and Universitas Terbuka Indonesia (UTI) are such examples. We have agreed to embark on staff exchange, joint research, joint e-journals, joint conferences and workshops, joint programmes, joint development and sharing of learning materials (including learning objects) and sharing of best practices.

More importantly, we need to provide quality education (Q-Education), that is, to improve on quality assurance, content development, e-learning delivery system, learning materials, assessment mechanisms, and physical learning and teaching facilities. One of our objectives at OUM is to promote the use of English as a medium of teaching and learning. In this regard, we need to leverage on the use of English as a pivotal instrument to collaborate in the delivery of our programmes.

Finally, we need to make borderless education more acceptable and more importantly, more equitable to all. In this regard, for us to forge even further, there need to be a better utilisation of technology, sharing of open education resources (OER), joint development of programmes, continuous enhancement of quality and effective sharing of best practices. We need to ensure that we are able to sustain borderless education so that many more will reap the benefits from it. One area that needs to be improved upon is human capital development, particularly in developing countries.

## 8. *CONCLUSION*

In this paper, I have shared with you OUM's experience in maximizing the full potentials of borderless education. We have been successful in leveraging on ICT and other technologies in the form of e-learning to complement to our traditional face-to-face delivery mode. We have also enhanced our international networking with other regional and global open universities as well as our strategic presence in several countries. With all these efforts, I believe OUM has been able to break down the barriers to borderless education.

Finally, I strongly believe that while an institution can make a strong inroad into borderless education on its own, a collaborative effort involving the right partners through effective

networking could do it better. In this regard, ODL and other higher education institutions in this region should jointly galvanise their resources to fulfil our common goals in enhancing access to quality education to all through e-learning.

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En China, el proceso tendiente hacia la creación de un sistema de aprendizaje para toda la vida se ha visto impulsado activamente por el Ministerio de Educación, donde se aprueban todos los proyectos relacionados con la materia y se autoriza a las universidades la aplicación de programas en esta modalidad.

La Red de Estudios Científicos de Educación de China (CERNET) en conjunto con la Red de Educación de China de Transmisión por Satélite Multimedia de Banda Ancha (CEBSat) son los principales instrumentos a través de los cuales las universidades en China están enlazadas.<sup>14</sup> Con ellas se busca la difusión de información a gran velocidad a lo largo del territorio nacional, fomentar el desarrollo de programas educativos conjuntos hacia la creación de una ciudad digital, funcionar como un mecanismo de enlace entre las universidades y concentrar información fundamental de la educación en China.

Ante ello, la cooperación en un programa de intercambio para la enseñanza del chino y el español entre China y México se vuelve una propuesta para satisfacer la creciente demanda de estudiantes interesados en aprender alguna de estas lenguas.

El papel que China juega actualmente en el ámbito internacional así como su desarrollo acelerado en la educación, plantean la necesidad de crear programas conjuntos.

El desarrollo en China puede ser atribuido, en parte, al aumento de oferta educativa en instituciones de educación superior. Tan solo en Beijing, en este año hubo una aceptación del 75% de los estudiantes que realizaron examen de admisión. Para el resto, la alternativa de la EDyL es una importante opción, puesto que hay cursos impartidos por las principales

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<sup>14</sup> Embajada en la República Popular China en la República Bolivariana de Venezuela, "Educación a través de la red" <http://ve.chineseembassy.org/esp/jy/x/qian441/t213020.htm>, consulta 15 abril 2008.

universidades de China que dan acceso a la educación a aquellos que en otro momento no hubiesen tenido oportunidad.

Un intercambio en EDyL se vuelve una oportunidad de acercamiento en espacios como la Comisión Binacional México-China del presente año, donde se planteó "...alentar mayores intercambios educativos y culturales y dinamizar la cooperación científica y tecnológica"<sup>15</sup>.

Lo notable de China es que el porcentaje de sus exportaciones en alta tecnología ha aumentado en más de un 10% en los últimos años<sup>16</sup>, y es evidente que aprovecha los avances tecnológicos en un sector que repercute en el fortalecimiento de la nación, como lo es la educación que resulta ser al fin y al cabo la base de ese desarrollo. China ha decidido utilizar las TICs en la educación y cada vez más se abren posibilidades de intercambio a nivel internacional, apertura, cooperación en la generación de modelos y métodos educativos así como una infinidad de oportunidades que la EDyL ofrece.

Por otro lado, debe resaltarse que la EDyL no se ve en China solamente como una opción para los alumnos que no tienen lugar en las universidades tradicionales o para los adultos, sino que se busca la integración de un modelo tradicional con un modelo no convencional. Es decir, los alumnos de educación superior complementan sus asignaturas presenciales con materiales ofrecidos por la misma universidad a través de Internet, añadiendo nuevos contenidos, herramientas y mayores alternativas de aprendizaje que enriquecen lo que el estudiante obtiene al asistir a los cursos presenciales.

Ya en el 2007, en China, un millón de alumnos (en comparación con una demanda de 10 millones para educación presencial) se encontraban registrados en las universidades ofertantes de educación a distancia, cantidad que va en aumento y que responde al Proyecto de Educación Moderna a Distancia iniciado en 1999, a nivel nacional.

Cabe resaltarse que la EDyL en China sigue una tendencia similar a la de México, puesto que esta modalidad es ofrecida por universidades convencionales o con modelos tradicionales, como la Universidad Nacional Autónoma de México (UNAM).

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<sup>15</sup> Presidencia de la República, Comunicados, "Concluye la reunión preparatoria de la III Reunión de la Comisión Binacional México-China", 26 mayo 2008, en <http://www.presidencia.gob.mx/prensa/comunicados/?contenido=35820>, consulta 17 junio 2008.

<sup>16</sup> El porcentaje de sus exportaciones en alta tecnología pasó a ser de 18.6% en el 2000 a 30.3% en el 2006 en The World Bank Group, "China Data Profile" <http://devdata.worldbank.org/external/CPProfile.asp?PTYPE=CP&CCODE=CHN>, Consulta 21 abril de 2008.

El papel que China juega actualmente en el ámbito internacional así como su desarrollo acelerado en la educación, plantean la necesidad de crear programas conjuntos. El desarrollo de la educación, la ciencia y la tecnología, han sido elementos fundamentales para la modernización de la República Popular China, ya que de acuerdo con los lineamientos de revitalización del país del gobierno chino, “La educación representa la base fundamental del desarrollo de largo plazo”<sup>17</sup>.

Tanto la Ciudad de México como Beijing o Shanghai intentan instaurar proyectos que pretenden enlazar a todas las universidades públicas de la ciudad, la creación de bibliotecas digitales, interacción entre académicos y estudiantes, así como la oferta de un servicio de Internet gratuito en toda la ciudad. Son programas conjuntos muy similares que requerirían de intercambio de experiencias para mejorar entre sí.

En el marco del hermanamiento entre las ciudades de Beijing y México, la vicealcaldesa del Gobierno de Beijing, Zhai Hong Xiong ha manifestado que hay distintos rubros en los cuales ambas ciudades pueden tener puntos de encuentro para la cooperación, entre ellos se encuentra la educación.<sup>18</sup> El hermanamiento entre ambas ciudades podría resultar como un factor fundamental dentro del cual se genere el interés entre ambas ciudades para la creación de líneas de cooperación en materia de educación en línea y a distancia de manera recíproca.

El sistema de educación abierta inicia en México en los 70, pero se reconoce que los avances más trascendentes han sido a finales de la década de los 90s<sup>19</sup> y ello no es casualidad, puesto que es ya en esa época que el desarrollo de las Tecnologías de la Información y la Comunicación (TICs) abría más posibilidades para esta modalidad educativa, por lo que tanto en China como en México comienza su mayor aplicación en esta misma época.

La UACM

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<sup>17</sup> Jorge Eduardo Navarrete, *China: La tercera inflexión. Del crecimiento acelerado al desarrollo sustentable*, México, CEIICH-UNAM, 2007, p. 163.

<sup>18</sup> Jefatura de Gobierno del Distrito Federal, “Transcripción de la ceremonia de suscripción de la Carta de Hermandad entre la Ciudad de México y Beijing, en el salón Oval del Antiguo Palacio del Ayuntamiento”, 10 de abril de 2007, en <http://www.comsoc.df.gob.mx/noticias/discursosj.html?id=1280406>, consulta 17 junio de 2008.

<sup>19</sup> María Dolores Sánchez Soler, “La educación a distancia en México y Propuestas para su desarrollo” en [http://www.anuies.mx/servicios/p\\_anuies/publicaciones/revsup/res110/txt4\\_2.htm](http://www.anuies.mx/servicios/p_anuies/publicaciones/revsup/res110/txt4_2.htm), consulta 15 abril de 2008.

La Universidad Autónoma de la Ciudad de México (UACM), creada bajo la iniciativa del Gobierno del Distrito Federal, corresponde precisamente a la solución de esta problemática de escasez de lugares para estudiar alguna licenciatura y lo ha hecho a través de la creación de siete planteles en sitios de la ciudad donde existe una mayor demanda educativa. Ante ello, ha generado distintos programas y una amplia variedad de carreras que permiten a los estudiantes contar con una licenciatura de acuerdo a sus necesidades.

A pesar de su creación y la apertura de cada vez más instalaciones, la UACM se ha visto rebasada por la demanda educativa y requiere de generar mayores espacios sin que impliquen un alto costo para el Gobierno del Distrito Federal. Por ello, la EDyL se vuelve una alternativa que está comenzando a instrumentarse a través de proyectos y creación de infraestructura como lo es la posibilidad de crear una red académica de enlace a todas las universidades públicas de la ciudad, creación de bibliotecas digitales, interacción entre académicos y estudiantes, así como la propuesta de que todas las escuelas de la ciudad cuenten con acceso libre a Internet así como con computadoras.<sup>20</sup>

No obstante, ante la conciencia de los beneficios que la EDyL podría ofrecer, son aún pocos los programas en los cuales se aplica esta modalidad en el Distrito Federal, y más pocos lo son aún en la UACM. Todavía en el 2007, la propuesta de instauración de EDyL en la UACM apenas formaba parte de un programa de mejoramiento de apoyo a la docencia, y las TIC en la educación, las videoconferencias, programas multimedia, bases de datos, bibliotecas digitales son apenas parte de un incipiente proyecto. La UACM aún requiere de infraestructura y de expertos en la modalidad de EDyL para que los proyectos en TIC educativas se vuelvan reales y la experiencia de China puede servir de un buen ejemplo para la instrumentación de la EDyL.

El programa de educación abierta y a distancia de la UACM de acuerdo con la Maestra Jovita Galicia, que es la encargada del Área de Modalidades Educativas no Convencionales, se encuentra aún en una primera fase de desarrollo<sup>21</sup> y se está creando un Área de Educación Abierta.

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<sup>20</sup> Bertha Ramírez, "Todas las escuelas de la ciudad tendrán computadoras e Internet, reitera Ebrard", La Jornada, martes 20 de mayo de 2008, en <http://www.jornada.unam.mx/2008/05/20/index.php?section=capital&article=036n1cap>, consulta 20 mayo de 2008.

<sup>21</sup> Jovita Galicia Reyes, "Retos para transformar el *habitus* docente frente a las demandas de la educación a distancia, el caso de la Universidad Autónoma de la Ciudad de México, en <http://www.virtualeduca.info/ponencias/290/ponencia%20mayo%2015%20VE.doc>, consulta 24 junio de 2008.

De acuerdo con cifras de enero de 2008, la población estudiantil en la UACM es de 9134 alumnos y alrededor de 675 profesores<sup>22</sup>, pero, la UACM aún no cuenta con la infraestructura suficiente ni los recursos como para admitir a todos los solicitantes, y por ello, se hace un sorteo para el ingreso.

Por ello, esta área de la UACM se ha enfocado a la búsqueda de modalidades educativas distintas al sistema tradicional para aquél sector de la población "...que no puede o no quiere adecuarse a las exigencias del sistema convencional."<sup>23</sup>

Lo que apenas se está alcanzando en la UACM es una combinación de programas semipresenciales y en línea, es decir, aún no existe la realización de programas que sean completamente en línea y a distancia, sino que se combinan con sistemas presenciales.

A pesar de ello, se tiene ya la planificación y fases para la transformación paulatina del modelo educativo tradicional hacia la EDyL. Comienza la planeación para la creación de materiales de estudio, asesorías, tutorías, medios y servicios como bibliotecas, trámites, certificaciones y otros.

La primera fase de esta transformación hacia un modelo de educación en línea y a distancia (que concluyó en marzo del presente año), logró distintos objetivos. Se creó un Consejo Académico Consultivo<sup>24</sup> de conocedores de la EDyL, la creación del área de Educación a Distancia de la UACM, la creación de un grupo de trabajo de profesores para la elaboración de los materiales para la modalidad semipresencial, la planeación de un curso-taller para la iniciación de la formación de los docentes y el diseño y elaboración de los materiales educativos necesarios para esta fase.<sup>25</sup>

La segunda fase, que debe concluir en julio del 2008, consiste en la realización del taller y la definición de los puntos anteriores.

La tercera y cuarta fases se aplicarán a partir de septiembre de este año y comenzarán apenas con la realización de la conducción del programa semipresencial para impartir cinco asignaturas y evaluación de la estrategia. Es entonces hasta la última fase que se incluirá en la

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<sup>22</sup> *Ibidem.*

<sup>23</sup> *Ibidem.*

<sup>24</sup> Formado por expertos de la UNAM, UAdeG, IPN y Tecnológico de Monterrey.

<sup>25</sup> Jovita Galicia, *op.cit.*

convocatoria de dicha universidad, la oferta de la modalidad semipresencial complementaria al sistema escolarizado y se comenzará ahora con la planeación de una modalidad en línea.<sup>26</sup>

Como puede observarse, la experiencia específica de la UACM en la EDyL está apenas comenzando, pero el interés y la labor por insertar estas modalidades educativas se vuelven un caso muy adecuado para el intercambio de experiencias con alguna institución china, o bien, para la cooperación en algún programa de esta modalidad.

## La UNAM

La UNAM, en su calidad de pionera en muchas ramas de la educación en México, no queda exenta de la experiencia en EDyL. Como una de las instituciones iniciadoras de esta modalidad educativa en este país, es una de las más avanzadas en cuanto a proyectos, programas, infraestructura y oferta educativa.

A través de la Coordinación de Universidad Abierta y Educación a Distancia (CUAED) se regulan los lineamientos a través de los cuales se conduce la educación a distancia dentro de esta Universidad y se aglutinan las instancias encargadas de la creación de programas, contenidos, materiales e infraestructura.

Los esfuerzos de esta instancia se han visto reflejados en la impartición de más de 10 licenciaturas, 5 especialidades y 8 maestrías a distancia cuyo impacto se ha extendido hacia otros estados de la República como lo es Tlaxcala, Chiapas, Hidalgo, Oaxaca y Puebla.

La UNAM cuenta con varios centros en sedes distribuidas en los Estados de la República mencionados anteriormente, donde se imparten algunas licenciaturas a distancia que tienen el aval de la UNAM, pues siguen un plan de estudios propuesto por esta Universidad.

Específicamente, la CUAED cuenta con un Centro de Alta Tecnología de Educación a Distancia (CATED) que se encarga de investigar, innovar y desarrollar modelos y sistemas educativos con ayuda de las TIC<sup>27</sup> para la implementación de programas de educación superior tanto a nivel nacional como regional.

La labor en Educación a Distancia ha sido desempeñada a lo largo de muchos años desde que el Sistema de Universidad Abierta (SUA) se instaura en esta Universidad, con el fin de lograr la creación de materiales didácticos, videos, objetos de aprendizaje, plataformas

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<sup>26</sup> *Ibidem.*

<sup>27</sup> Centro de Alta Tecnología de Educación a Distancia, en <http://www.cated.cuaed.unam.mx/>, consulta 2 julio 2008.

tecnológicas educativas, modelos pedagógicos adecuados a las TIC contemporáneas, creación de aulas virtuales e infraestructura no simplemente a través de las TIC sino dentro de la misma Universidad como laboratorios o bibliotecas.

Para el ingreso a un SUAyED se piden los mismos requisitos que para una modalidad presencial, como lo es el examen de colocación y un promedio mínimo de bachillerato, puesto que se afirma que la oferta educativa que se da a través de este sistema, es de la misma calidad que el presencial. A los alumnos aceptados, se les imparten una serie de cursos propedéuticos introductorios para el uso de las herramientas, la explicación del funcionamiento del modelo, presentación de algunos conceptos, en suma, una familiarización con el sistema para su buen uso y mejor aprovechamiento. Por supuesto, también los profesores involucrados en esta modalidad educativo cuentan con una formación integral para que su papel como tutores cumpla los objetivos educacionales.

La UNAM, en cuanto a la difusión de la educación superior a distancia, a través de la CUAED, se ha visto participando activamente en torno a un Espacio Común de Educación Superior a Distancia (ECOESaD) con la colaboración de 7 instituciones públicas del país para la cooperación universitaria en cuanto a programas, planes de estudio, investigación multidisciplinaria, comprensión intercultural, uso pedagógico de las TIC y otros elementos.<sup>28</sup>

Dentro del ECOESaD se plantea un modelo de cooperación para el reconocimiento de créditos, intercambio estudiantil, programas y cursos compartidos en conjunto, acceso a bibliotecas digitales y otros servicios que al auxiliarse, facilitan los objetivos de una educación pública y de calidad a través de medios distintos a los tradicionales.

Actualmente, la UNAM en cuanto al SUAyED se encuentra ante varios obstáculos como lo es la forma de regulación, la cobertura y la planeación de licenciaturas puramente en línea. Algunas de las licenciaturas que se pretenden impartir en línea están orientadas a los estudiantes que residen fuera del área metropolitana, por lo que dentro de la misma UNAM existen algunas consideraciones que impiden la realización de una licenciatura enteramente en línea.

El avance en la impartición de licenciaturas y posgrados a distancia en la UNAM pareciera ser apenas reciente, pero ha sido producto de una amplia capacitación y planeación por parte de los que forman parte de esta modalidad educativa y todos los colaboradores en la

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<sup>28</sup> Espacio Común de Educación Superior a Distancia, en <http://www.ecoesad.org.mx/> consulta 2 julio 2008.

creación de estos programas han sido cada vez más numerosos. La elaboración de una licenciatura a distancia consta de una ardua labor en cuanto al involucramiento de diseñadores, pedagogos, profesores, ingenieros, psicólogos y profesionistas de otras disciplinas, por lo que apenas son pocas las licenciaturas y posgrados impartidos a distancia. Ello no implica que la modalidad en línea y/o a distancia se encuentre presente en un sinnúmero de cursos, diplomados y talleres que acercan a estudiantes, académicos y a la población en general a este modelo educativo.

La UNAM por supuesto también se enfrenta a cuestiones como la alta demanda de estudiantes que desean ingresar a alguna de sus licenciaturas a nivel presencial y el SUA está siendo cada vez más demandado, por lo que la EDyL forma parte importante de las estrategias de esta Universidad para mejorar la calidad, cobertura y la equidad con el fin de ofrecer una educación pública con la alta calidad que caracteriza a esta Casa de Estudios.

Para ello, también se han firmado convenios de cooperación en esta modalidad educativa con otros países, como lo fue la creación del “Centro Piloto de Formación: OUI\_COLAM\_UNAM (Organización Universitaria Interamericana Colegio de las Américas UNAM) para la Utilización Pedagógica de las Nuevas Tecnologías de la Información y de la Comunicación (NTIC) y de la Enseñanza a Distancia (EaD) en la Educación Superior” donde se promueve la comunicación entre los países de América para el intercambio cultural y educativo utilizando la modalidad de educación a distancia.

La EDyL en la UNAM es la más avanzada en cuanto a educación pública en el país, y la demanda que tiene así como la infraestructura se vuelven un obstáculo que se ha ido superando exitosamente y con calidad, aunque no por completo. A pesar de ello, son aún muchos los campos por los cuales el SUAYED necesita mejorar y son continuos los obstáculos que se le presentan.

## **Historia y Perspectiva- Ilustración del curso para el desarrollo del modelo no-tradicional de la Educación superior en China hacia la construcción de una sociedad de aprendizaje<sup>29</sup>**

Dr. Ge Daokai,

Presidente de la Universidad Central de Radio y Televisión

*La historia de las sociedades de aprendizaje data desde finales de los años 60 y principios de los 70 cuando la UNESCO habla ya de una educación para toda la vida, volviéndose esta una tendencia mundial que se concretiza en los años 90 con la instauración de modalidades de aprendizaje distintas a las tradicionales.*

*Debe tomarse en cuenta que hay que enfocarse en los estudiantes, que no simplemente la educación puede provenir de las universidades, que los sistemas de aprendizaje deben ser ahora mecanismos abiertos y flexibles y que las plataformas de enseñanza deben cumplir con el principal objetivo: difundir y enviar la información.*

*Las nuevas modalidades educativas se caracterizan por ser autónomas, abiertas, equitativas y convenientes aunque hay distintos acercamientos para abordar la EDyL. China se ha encontrado en la coyuntura de determinar qué acercamiento debe tomar.*

*Para ello, ha desarrollado diversos tipos de educación superior no convencional: universidades nocturnas, escuelas por correspondencia, educación a través de la radio y la televisión, clases de tiempo completo para adultos, exámenes autodidactas, programas para segundas carreras o grados profesionales y, por supuesto la educación en línea y la educación abierta.*

*1950-1978 Periodo de exploración*

*1979-1998 Exploración de as seis modalidades de educación superior no convencional*

*1999- actualidad, educación abierta y a distancia para la comprensión de futuros modelos educativos.*

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<sup>29</sup> Resumen de la conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo

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*Los modelos no convencionales de educación superior se han desarrollado considerablemente en las últimas cinco décadas, ahora hay más recursos, más experiencia y mayores proyectos. Para construir una sociedad moderna de aprendizaje es indispensable usar*

*las TIC, pues a estas modalidades educativas aún les falta un camino largo por recorrer. Debe haber innovación y reestructuración, los contenidos deben ser reformados y los recursos mejorados y mejor utilizados.*

## **La Práctica y Exploración de Shanghai en torno a la creación de una Ciudad de Conocimiento**

(Shanghai's Practice and Exploration in the Building of Learning City)<sup>30</sup>

*Xue Mingyang*

*Director de la Comisión Municipal de Educación de Shanghai*

*Shanghai busca establecerse como una ciudad de aprendizaje a través del uso de la tecnología y la capacitación de la población con el fin de mejorar su calidad de vida. Promueven a su vez la educación para toda la vida a través de la red de educación en donde se encuentran enlazadas todas las universidades de la ciudad.*

*Shanghai usa herramientas como transmisión por satélite o Internet para conectar a todas las escuelas de todos los distritos y condados que componen Shanghai.*

*Incluso se ha modificado la legislación para proveer de más servicios a los ciudadanos en el marco de la creación de ciudades de aprendizaje.*

Since 1999 when Shanghai took the lead in launching the program of building learning city in China, we have been making active efforts to search for the way to build a learning city that meets the needs of the socioeconomic development, so that the citizens may fully enjoy the fruits of the modern educational and cultural achievements. Today, I am very delighted to share with you the experience and reflections on building a learning city. My speech will focus on the causes, practice and exploration, and further consideration of building a learning city in Shanghai.

### **1. Causes of building Shanghai towards a learning city**

Shanghai is achieving rapid socioeconomic development. During the process of changing Shanghai to an international economic, financial, trade, and shipping center and a modern international metropolis, the building of learning city has become a fundamental task in the economic development of Shanghai, and has substantial realistic significance.

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<sup>30</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo

**(1) As an international metropolis, Shanghai has the duty to provide learning chances to all citizens**

As a typical city of immigrants and an international metropolis, Shanghai has attracted thousands and thousands of people from abroad or other areas of China. According to statistics, the people having their origins elsewhere account for over one third of the 18 million permanent residents in Shanghai. Many people with a domicile in Shanghai are new Shanghainese. People crowd into Shanghai, with a strong urge to attain further development. Development depends on a background of learning, which only occurs where extensive and sufficient chances are available. Shanghai has the duty to provide such chances to its citizens. Meanwhile, building a learning city and promoting comprehensive development of individuals, especially providing equal chances for individual development, are key elements of building a harmonious society. A learning city will provide equal learning chances for all its citizens, putting them on an equal standing for development and fair competition, which is the theme of the building of learning city in Shanghai.

**(2) Shanghai feels the urge to improve the abilities of the labor force as required by the industrial structure upgrading**

Shanghai is at an economic transition stage of industrial restructuring. With the development of modern tertiary industry and advanced manufacturing, a large proportion of the labor force will shift from the low-end industries to high-end industries. To adapt to this change, Shanghai has to improve the abilities and qualifications of its labor force. It is estimated that the demand for technical workers will increase by over 5% every year by 2010. Among the technical workers of Shanghai, the percentage of senior technical workers will increase from the current 15% to 25%. Technical workers and senior technical workers will reach 5%, and senior professionals below the age of 45 will amount to 80%. As a city lacking natural resources but with a high level of economic, scientific, technological and cultural development, Shanghai has to propel its building of learning city and the upgrading of the educational and technological competence of the labor force.

### **(3) Citizens desire to improve their living standards and have diversified learning needs**

The advancement of a city is reflected not only by the material aspects but also by its spirit. Building of a learning city, integration of learning into life and cultivation of the habit of reading will enable our citizens to live a better life in the spiritual respect and will contribute to further improvement of their living standards. In fact, after more than 10 consecutive years of economic growth at a two-digit rate, the average per capita income in Shanghai has increased considerably. With living standards improved substantially, the citizens show ever increasing cultural and educational demand. Over the most recent decade, the per capital consumption structure of households in Shanghai has changed considerably, and the Engel's Coefficient has dropped remarkably. According to statistics, food consumption of residents in Shanghai has dropped year by year from 56.5% in 1990 to 30% at present, and the consumption on education, cultural and entertainment services has risen year by year from 11.9% to 20%. Meanwhile, more than 80% of the citizens are willing to pay more for cultural and education services. It is evident that people care more about improving the quality of their spiritual life and that they wish to improve their abilities and competence through learning to fit in with the changing world.

It is due to the above-mentioned changes and needs brought about by Shanghai's socioeconomic development that Shanghai timely sets a development goal of building a learning city. According to the plan, Shanghai will have established a basic framework of a learning city featuring "everyone learns at any place at any time". The framework has four dimensions: (1) A social consensus of lifelong learning. Most citizens adopt the philosophy of lifelong learning and treat learning a lifestyle; (2) A full range of lifelong education system that provides good learning resources and relatively sufficient learning chances for the citizens; (3) A development mode diversified and extensive learning organization; (4) Joint force of individuals, community and government for the building of a learning city.

## **2. Practice and Exploration of Building a Learning City in Shanghai**

In view of the reality of city development of Shanghai, the building of a learning city will be implemented in several steps. First of all, we will make use of the administrative advantage of the

government to set up a government-directed lifelong education system. Then, we will combine and coordinate the efforts of all works of life to build a lifelong learning system for Shanghai's citizens. Centering round this concept, Shanghai has made endeavors in various aspects of the building of a learning city.

**(1) Promote lifelong education, diversify education network and improve lifelong education system**

At present, the education network of lifelong education in Shanghai is composed of adult schools established and managed by the government, education and training institutions established and managed by guilds or firms, and education and training institutions established and managed by social groups and individuals. According to statistics, in Shanghai, there are 56 independent secondary and tertiary adult education institutions that offer diploma education, more than 2,100 non-diploma education or training institutions sponsored by the private sector, and 121 township technical schools for adults. Almost all neighborhoods and townships have community schools and schools for senior citizens, and almost every trade and large enterprise has its training center. In the meantime, Shanghai has basically built a three-level education system with community colleges as its principal part and neighborhood and township community schools as its backbone. With regard to the TV University which is scattered in 19 districts and counties, from 2000 on, the enrollment has been ascending at over 25% every year. A multi-level and multifunction lifelong education network is taking shape.

Based on these foundations, we are taking various measures to improve Shanghai's lifelong education system. Firstly, we are working on a resources integration plan based on the continuous and adult education resources of higher education institutions as well as TV University and spare-time universities. Step by step, we are developing a system whereby different levels and categories of education may link with and supplement each other. By means of the system of recognizing and transferring academic achievements, we are offering citizens accessible, alternative and diversified forms and chances of learning. Secondly, we are taking full advantage of the instructions offered by Shanghai Office of Building a Learning City to community colleges, and trying to develop community colleges into an important carrier of secondary and tertiary adult

education in the area concerned, an integrated platform of vocational skills training, a major venue of community education and an instruction center of lifelong Learning for citizens. In the mean time, we are boosting the standardization of community schools and township schools for adults. Thirdly, we are striving to foster a training system focusing on different people to meet their learning demands. For example, in order to enhance Elder Education, we are establishing Elder Education Research Center, and Teacher Training center for Elder Education. Bearing in mind the needs posed by the industrial restructuring of Shanghai, we are developing a long-term system to train and transfer the agricultural labor force. This system, which is led by the district or county and implemented by townships, involves educational resources of the whole society, and will improve the quality of training and the employment rate.

## **(2) Set a basic information platform for lifelong education**

So far, Shanghai has constructed one city-level central station and 19 district/county-level sub-centers of the satellite network platform for lifelong education. Satellite receiving terminals have been set up in 208 neighborhoods (townships). In addition, a pool of large quantities of quality lifelong education resources has been fashioned. In such a pool, 30% is on healthcare, 13% on etiquette and 21% on home education. The information platform provides 8 hours of live educational programs per day, and delivers more than 100 episodes of quality teaching videos to neighborhoods and communities. The convenience and accessibility of the information platform have largely stimulated the enthusiasm of the citizens about learning.

While actively employing the Internet and the satellite system to enable community colleges of districts and counties, community schools of neighborhoods, adult schools of townships, training programs of the residents' or villagers' committee to access and share educational resources, Shanghai is questing for a related management system to achieve further improvement and development of the modern information platform of lifelong education.

## **(3) Build learning organizations and carry on learning organization activities**

According to the provisional assessment standards of Shanghai on building learning organizations, the education department of Shanghai, in coordination with related function departments, made a pilot assessment of some of the government agencies, communities, townships, public institutions and enterprises in their activities of building a learning organization. Based on this pilot assessment, the Assessment Standards of Shanghai on Building Learning Organizations has been formally promulgated. Besides, the related government departments have coordinated to formulate the corresponding administrative rules, define their respective duties and reinforce cooperation. Meanwhile, different organizations exchange their experience on building a learning organization, make joint efforts to find solutions, and clone the success.

Now, there are 10 state-level pilot zones of community education in Shanghai, four of which have been listed by the Ministry of Education among the nationwide exemplary zones of community education. There are also 54 city-level pilot community education streets and townships. The campaign of learning family is going on in thousands of households. Since 2000, Shanghai Municipal Education Commission has carried on the program of developing modern corporate education systems in 28 large and medium-sized enterprises and 32 guild or corporate training centers. Building learning enterprise has become an important goal of corporate development. The program of building learning organization has been initiated in more than 70 trade unions and more than 10,000 enterprises and public institutions. Moreover, the programs of building learning government agency, learning downtown, learning work unit and learning building are in full swing throughout the city.

#### **(4) Organize learning activities of citizens and create brands of learning activities**

Based on the concept of “integrate learning with everyday life”, we have planned and launched a series of learning activities for the public. Among them, there are influential well-known brands such as “Oriental Rostrum” and “Shanghai Book Exhibition” as well as popular and unique activities such as “All Citizens Learning Week”, “Reading Extensively for the Development of China”, “Household Internet Craze”, and “Etiquette Classroom”. These activities have become the labels of building a learning city of Shanghai. In addition, plenty of overseas training programs have been introduced into Shanghai, such as Chartered Financial Analyst, International Software

Engineer, and Project Manager, which satisfy various learning needs. Through these learning programs and activities, the citizens are fascinated by knowledge, which in turn arouses their enthusiasm for learning and creates an ideal learning climate. These programs and activities play a very important role in improving qualifications and abilities and are hailed by the citizens of Shanghai.

#### **(5) Improve the related mechanisms and update the lifelong education system**

Shanghai is making full use of modern information technology and developing various mechanisms to promote lifelong education. For example, we have devised a “lifelong learning record”, which has such functions as learning account management, academic record as well as consumption and bonus of learning activities, and may help us gather statistics of the learning behaviors of citizens. Meanwhile, we are making great efforts in the study on mutual credit recognition among different educational institutions, and are working on a “credit bank” system which records, recognizes, stores, accumulates and transfers credits. In fact, we have encouraged certain colleges and universities to recognize credits on a tentative basis. Furthermore, Shanghai is improving and strengthening its legislation to expand the extent to which social educational resources are open and shared so as to provide more educational venues and facilities and to motivate various full-time schools to provide more education services to the citizens.

Because of our hard work, remarkable achievements have been made in the building of a learning city. According to statistics, Shanghai has 17 district/county community colleges, more than 200 community schools and nearly 5,000 school branch campuses and teaching sites, covering 19 districts and counties, more than 200 neighborhoods and townships, and offering more than 600 courses in eight fields including social science, language, and natural science and technology. Now, the learning needs of various groups of people are basically met. An open, convenient and accessible lifelong education system is unfolding. The lifelong education and training resources have been basically integrated, the climate of lifelong education is taking shape, and the concept of lifelong education is being widely accepted.

### **3. Further Considerations on Building a Learning City**

At present, building a learning city has been an inevitable trend of urban development. In order to exert the function of lifelong education in Shanghai's socioeconomic growth, and to achieve comprehensive, harmonious and sustainable development of the people, we will make further quests in the following fields:

#### **(1) Continue the management system reform and improve laws and regulations concerning lifelong education**

At present, Shanghai needs to develop good and scientific management systems, better its planning on the building of a learning city, integrate the educational resources of the entire society, and ensure the healthy development of its endeavors to build a learning city. For this end, we should make further research on the legislation concerning lifelong education, clarify the rights, obligations and duties of the government, enterprises, public institutions and individuals, and construct the legal system to regulate the activities of building a learning city.

#### **(2) Develop a mutual credit recognition mechanism and establish lifelong education accounts for citizens.**

Shanghai will break down the barriers to "mutual credit recognition", and improve the link and mutual recognition among different categories of continuous education so as to offer convenience to citizens in their learning. We will try to establish a "Lifelong learning record" system and a "Credit Bank" system in Shanghai, and give incentive for the citizens to take part in various learning activities. We will also make research on the "No-barrier Entrance" and "Flexible Learning" systems, offering people the freedom to choose their own study hours, study forms, courses and examination dates that match their job and life.

#### **(3) Develop a modern IT-based lifelong education service system**

As the advantages of distance learning are getting more and more evident in the building of a learning city, we will find out how to build a learning city characterized by distance learning. We

will further integrate the adult education resources of the city, districts, counties, and industries, fully utilize the modern information technology and our distance learning network to build a multifunctional, multi-level, accessible and open lifelong education service system that offers diploma education, vocational training, entertainment education and cultural education. We are to set up a city-district-neighborhood three-level learning support structure covering the whole city and facing the citizens, so as to deliver education services to every household.

#### **(4) Diversify financing sources and create a fund assurance mechanism**

The steady advancement of building a learning city is supported by a fund assurance mechanism with diversified financing resources. On the basis of the current investing mechanism, we will attach more importance to arousing the enthusiasm of varied organizations, citizens and enterprises to widen the financing sources of Lifelong Learning. While increasing its expenditure on education, the government should employ all sorts of policy levers, encourage and guide the enthusiasm from every side to form a joint financing mechanism in building a learning city, combining the funds from the government, enterprises, public institutions, social organizations and individuals.

Ladies and gentlemen, the building of a learning city is beneficial to the development of Shanghai, beneficial to the satisfaction of people's learning needs, and beneficial to the upgrading of Shanghai's spiritual civilization. In 2007, Shanghai's per capita GDP reached USD 8,500, ranking among the moderately developed countries, which forms a solid foundation for our work to build a learning city. In the future, Shanghai will make further efforts, learn the valuable experience home and abroad, keep on making progress and innovations, keep on improving its education system, and provide all-round, multi-level, and diversified education services to every member of our society.

## **Un mejor aprendizaje, una mejor ciudad: Misión y Responsabilidad de las Universidades**

### **Abiertas**

(Better Learning Better City: Mission and Responsibility of Open Universities)<sup>31</sup>

Zhang Deming

Director del Grupo de Educación a Distancia

Presidente de la Universidad de Televisión de Shanghai

*China necesita de gente capacitada y Shanghai (cuyo 85% de la población cuenta con una profesión) busca la promoción de ciudades de aprendizaje y por ende, mejorar la calidad de vida. Se busca la creación de recursos y oportunidades para los ciudadanos a través de la tecnología y de la educación.*

*La intención es que a través de satélite e Internet se conecten las escuelas de todos los distritos y condados con el fin de crear una verdadera ciudad de conocimiento. La municipalidad de Shanghai organiza actividades para su población con el fin de fomentar el aprendizaje y proveer de más servicios educativos, impartiendo ya más de 600 cursos a través de la educación a distancia y en línea en ciencias sociales, lenguas y tecnología. “Todo para los estudiantes y para todos los estudiantes.”*

Two figures are fundamental in the development of distance education in China:

The first one: I quote a piece of news (on Chinese Lunar New Year) from Xinming Evening News, a local newspaper enjoying over 1 million readership, that Google, the world’s largest search engine, issued its hot search in Shanghai in 2007, “Dianda, or STVU” was on the top list and it became the hottest topic in Shanghai;

The second figure: 46246 students were registered with STVU, accounting for 56% of the total college student population in Shanghai this year and the number of students helps the University become the largest higher education institution in Shanghai.

The above mentioned figures not only reflect that residents in Shanghai attach greater attention to “Life-long Learning” but also demonstrate that STVU plays an increasingly important

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<sup>31</sup> Conferencia ofrecida en el Foro Global de Educación Abierta y a Distancia organizado por la Organización de Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO), el Consejo Internacional para la Educación Abierta y a Distancia (ICDE), el Grupo de Educación a Distancia de Shanghai y la Universidad de Televisión de Shanghai. Efectuado en Shanghai, China, del 19 al 21 de octubre de 2008. Con la asistencia de 120 universidades de 37 países del mundo

role in life-long learning system in Shanghai. STVU is the NO.1 choice for “further study” among employed people. This best reflects the missions and responsibilities as an open university.

#### Missions for Open Universities in the New Century

Study and learning is crucial for everyone. As a Chinese saying goes: “If a child loves learning, it is like the sunshine of the morning; if an adult loves learning, it is like the sunshine at noon; if an elderly loves learning, it is like brightness of a candle.” Learning will make people feel achieved and pleasant; learning will make life more meaningful; learning will help the society to make progress; learning will make the city better. As a learning city, we will work together to create opportunities, to share success, to enjoy development and harmonious progress.

The knowledge economy is enjoying its rapid development and life-long learning is a compulsory task for every citizen. Thus, building a learning society so as to raise a nation’s comprehensive competitiveness is the fundamental objective of development in every country worldwide. Building a learning society is the request and of the new century and the must of history. “All people learning and life-long learning” has met new challenges both in terms of coverage of people and time. Open universities have witnessed such challenges as we are the pilots and major forces in open education and we need to prepare ourselves for such challenges. “For all learners, all for learners is the mission and responsibilities of open universities in the new century and is the approach for us to survive and the theme for us to pursue further development.

“For all learners” means that open universities shall provide quality education services to every one in the society on an equal footing. “All for learners” means that open universities shall create a learner-centred learning environment providing services based on learners’ features and needs and provide them with an all-round development. Open universities shall utilize all their power and resources so as to help all learners to be successful.

Open universities shall set their feet in the “sea of people” and take a proactive altitude to provide service to all the learners. Therefore, the openness and sublimability of open universities can be realized. We must develop and adjust with the development of people and society and focus on the all-round development of people. We shall target both present and future development. Only by doing so, can open universities develop with people and obtain strong vitality and momentum of development.

#### **Develop with the Time: The Practice and Exploring of Open Education**

Shanghai is developing to become the hub of the international economy, finance, trade and shipping and working hard to be a modern international metropolis. As the most dynamic city in China, Shanghai has maintained two-digit growth for 16 consecutive years. The adjustment and optimization of industry has promoted the growing demand for talents: white-collars need life-long learning for professional and personal development whereas blue-collars need life-long learning to be competent for their current posts. It is known that Shanghai is one of the top 10 most populous cities in the world with nearly 1/3 people from other parts of the country and they are in bad need of learning to equip themselves to work and live in the city; in the meantime, senior citizens account for 1/5 of the total population and they need life-long learning to enjoy better life and upgrade their life quality.

**——Involving all learners and establishing the open education concept of providing education services to all the people**

“For all learners, all for learners”

We deeply feel the sublimability of missions and the significance of responsibilities of open universities and we are urged by such missions and responsibilities as exploring and practice: Tolerance and openness is the features of Shanghai, a city of immigrants; “Welcoming all types of cultures and customs” is the characteristics of Shanghai, a city at the estuary of the Yangtze River. Because of its special development path and history, Shanghai is known to have the culture of fluidity and inclusiveness. In the Shanghai people’s eyes, all the people from overseas or from other parts of the country are all the people participating in the development of Shanghai and they are all given a name of “New Shanghainess”. The time requests open universities shall be more open than before and deliver education to all people on an equal footing. We shall understand that everyone is eligible to receive our open education.

Therefore, no conventional universities can rival STVU in terms of the diversified age groups of students and extensiveness of their profession. We have students from the frontline of factories, farmers, staff from offices, taxi-drivers; we have overseas Chinese students, students from Hong Kong, Taiwan and we even have service people from satellites of “Shenzhou 5,6,7”soldiers from peacekeeping troops in Haiti. Li Bing, known as “Blue-collar Hero”, China’s model worker and Zhu Xueqing, people’s member of the NPC are all our outstanding students. The youngest students are only 16 or 17 and the oldest student, the 75-year-old Xie Baosheng is

learning for her English major of junior college degree. Some students are learning for their first degree and others are for further study. Zhu Jie, PhD, expert in eye-ground disease is studying Law and Xu Yinzhe, Master of Law is studying Engineering Management. These years, we have seen a growing number of non-local students and a typical example is in No.1 Branch of Minhang District, 60%of 7912 students are from 28 different provinces of China. We have also seen many couple students, mother and daughter students studying together.

We have also seen disabled students with strong mind: Zhong Yanchun, a cancer patient who keeps on studying during her lifetime and obtained her graduation diploma in the last minute of her life; Yang Jie , who lost both his arms uses his mouth to paint and overcomes difficulties to learn to use computer and finished his study with distinguished scores; Zhong Haihong, an infantile paralysis patient, is a member of sitting volleyball player of Shanghai Team. She prepared for both 2008 Beijing Paralympics Games studying in STVU and finally won the championship in the Games.

Education conveys civilization and knowledge changes one's fate. STVU helps to achieve many students' dream of studying in college. Providing education to general labor force, open education is different from elite education. We know that general labor force is the major force in the society and the society will achieve an all-round and harmonious development only if the general labor has achieved their development. We strongly believe that education must face to all the people and we, as an open university must provide service to these people so as to improve our valve and gain support from all the people.

#### **——Mastering the demand of the time, providing quality education to learners**

Open universities shall have sharp insights of social issues so as to provide open education opportunities to potential learners, thus its flexibility and social functions can be realized. We have successfully grasped the opportunity of huge demand of talents in Shanghai's "Four centres" development. We take a proactive approach and set up Finance, Logistics Management, Business Management and other sought-after disciplines in line with Shanghai's Most Urgently Needed Talents Training Program. In the meantime, we keep on improving our courses and our education mode and provide a considerable number of qualified talents with practical skills for the modern service industry. The animation industry is booming in Shanghai and there is a huge demand for such talents and we set up a discipline of "Animation Design". This year, we focus on

set up a new discipline: Metro Transportation, to fulfill the need of 20,000 talents in the filed.

We conduct various technical training programs so as to meet the diversified needs of people at different levels. Some successful programs are as follows: The program of the Computer Application Capability Examination, which has witnessed its 15 years of exploration, innovation and optimization, is still a popular program in Shanghai and so far 4.1 million candidates have participated in the training, among whom, 1.89 million achieved certificates; ACCA, a Sino-UK-Hong Kong joint program has received over 700,000 trainees; 55,000 students have participated in EBA, which has become a famous program in quality education among the blue-collar workers in Shanghai; we have also played an important role in an initiative: “Welcoming the 2010 EXPO, To Learn English and Mandarin”, in which 1 million people in Shanghai involve . Various course-books with integration of multi-media have been published and this has provided people in Shanghai with learning materials and environment.

The practice has proved that learners are dominant in running educational institutions and open universities shall be learners-oriented. The foundation of a guaranteed quality education is that open universities shall understand that their responsibility is to provide learners with high quality education. If this foundation is becoming solid, open universities can get supports both from the government and from the society so as to achieve a sustainable development. Over the past years, we have independently designed and developed different multi-media teaching resources and, by making full use of our advantages in technology, we set up such sub-websites as “E-time”, “Literature Gallery” and virtual teaching practice bases including “Virtual Court”, “Virtual Machinery and Electronic Lab”; 10 study support platforms have been established; a “Mobile Campus” has been developed applying MP3, SMS and other technologies and it is very popular among the students.

**——Utilizing open education resources and know-how, actively promoting the development of a learning city**

History of development, ancient and modern, /Chinese and foreign, has shown that the run of the process of any modernization contains different economic and cultural strategies. Shanghai, known for its modern cultural facilities, such as the Oriental TV Tower, Shanghai Library, The Grand Theatre and Shanghai Museum together with its abundant community facilities has witnessed a new framework of a “Metropolis with New Cultures”. People can enjoy diversified cultural festivals in the

communities: Study Festival, Reading Festival and non-profit public lectures. All of these have demonstrated that Shanghai is in the process of becoming a learning city.

So what can we do to contribute to such a process as open universities? How to bring our advantages into full play and how to make “For all learners, all for learners” into practices? I believe that we should work hard as a promoter and contributor to create more life-long education opportunities in the building of the learning city and to provide quality education resources to establish a large life-long learning platform for the broad masses of the residents.

A “Virtual Campus” across city and suburbs of Shanghai has already been established and a “Three-in-one Network”: satellite communication network, telecommunication network and teaching system network are integrated. We have enjoyed our network capacity of 3130G, 265,841 course-ware, over 30 million visitors of our education resource database. The magnificent Learning World was set up; using the newest concepts and this helps us to enjoy the integration of campus and education service industry and a platform for different education institutions. We are also managing and maintaining the operation of “Shanghai Teacher Education Network” and “Shanghai Vocational and Adult Online Education Network” and other education networks. In the meantime, we are implementing our life-long education philosophy via our Online University for Senior Residents. The Online University for Senior Residents dispatches 3,559 connections in 19 districts and townships in Shanghai working for 276,000 senior learners and this accounts for over 50% of the total number of senior learner population in Shanghai.

Thanks to the support from Shanghai Municipal Government, the Guide Centre of Shanghai Learning City Development was set up in STVU, whose responsibilities include providing guidance as well as coordination to the work of conducting life-long learning education and the Centre has become a hub of Shanghai’s life-long learning education system. The Centre opens a more effective and easier channel for open education to be accessible to the communities and the concept of “For all learners, all for learners” will enjoy its further development with the help of this platform.

Over the past years, together with its over 50 branches, STVU is implementing its principle of “For all learners, all for learners”. The University has maintained its position as a Mega University for 6 consecutive years with 230,000 graduates at undergraduate and junior college levels. Over 500,000 learners have participated in different training programs in the University annually and

this accounts for 25% of the total number of trainees citywide. At present, the total student population is 112,500, which means that 1 out of 3 adult college students is from STVU.

Known for its No.1 in student population, rich education resources, sophisticated open education concepts and advanced IT, STVU is always working for the people in Shanghai and provide them with appropriate learning opportunities, resources as well as service and indeed the University is Shanghai people's "University by your side". We are working hard to contribute to the development of building a learning city with a modern, flexible, open and harmonious concepts.

### **Progressing with the Time: The Strategic Thinking of Open Universities**

Today's achievements and brilliance will become the past results, but the mission and responsibility of "For all learners, all for learners" will accompany us to move forward. We have received praises and positive comments, nevertheless, we believe that STVU has only achieved certain progress and we need to develop our concepts and exploration.

#### **——Open universities shall focus and enhance the establishment of brand of a quality open education**

Quality is the lifeline of open universities. Open universities shall not only focus on the quantity issue, but more importantly, we must attach great importance to quality issue. With an increasing number of people recognize the concepts of equal education and open education; we have seen that today's conventional colleges and training institutions have also been introduced in the open education sector. Therefore, only when open universities improve their development of quality education and brand building can they gain strength and competitiveness and achieve a stable and sustainable development.

There are many factors impacting the quality of open education which include the establishment of high quality teaching faculty, quality education resources and a well-established learning assistance, strict assessment system and comprehensive quality monitoring approaches. These years we have adopted an approach combining open entrance policy with strict teaching process and assessment management. We work with enterprises to cultivate talents seeking for a close tie between theory study and practical skills. The "Teaching quality assurance committee" was established to conduct the study, guidance and consultation for the issue of teaching quality. We are now working hard on a key program: establishing criteria evaluating the quality of our 110,000 learners with different learning and working background and this criteria will be used to guide our daily teaching practices.

**——Open universities shall continuously better its tailor-made learning support system facing all the residents**

It is an important component part of running an open university to establish and perfect its learning support system and it is also the fundamental issue of our ultimate goal to carry out “All for learners”. We have broadened our views in open education development and with the implementation of our target: “For all learners”, diversities have been both observed in the features of learners and their learning demands. The general public have a high demand in education products and education service and we have seen the necessity and the urgency of building a comprehensive, perfect and tailor-made learning support system.

Over the past years, we have conducted positive exploration in learning assistance and certain examples are: Student contact centre, One-stop learning support centres across Shanghai and learning support platforms such as IT-based enrolment system, Online classroom platforms and Dissertation design and guidance system. However, these approaches are only the first step of diversifying learning assistance. The fundamental issue is the establishment, upgrading and improvement of such learning support modules and to achieve a tailor-made learning support to serve the diversifying, increasingly broad masses of the learners.

**——Open university shall have the globe in view and venture in the international open and distance education market**

The globalization and internationalization of open universities is an unavoidable trend. Therefore, we need to open to the world and take an active part in the international exchanges and collaborations. I believe that this is one of the reasons why we have observed a great number of international conferences on open and distance education have been held and this is also the reason why we see so many presidents of universities are here with us. Over the past years, joint programs have been set up with the US, Australia, Korea, Japan and other local universities. The sharing of education resources is also promoted in STVU. We believe that education resources and more importantly, education experiences shall also be shared internationally as we are in the time of globalization and internationalization. In June of this year, ICDE auditing experts were invited and we have learned from them the objectives, standard and requirements of open universities in today’s world. We have also published a series of books: “International Distance Education Classics” aiming at providing our Chinese colleagues with the

research results of the international open education for us to learn and to share. If we say the fundamental issue of internationalization of open universities is the establishment of a “Non-boundary” strategic mentality, then we have achieved the first step of our “Inviting external experts and going out to learn”. But there is a lot more for us to do if we would like to achieve full openness to the world and venture in the international open education market.

Qu Yuan, China’s ancient great poet once wrote: There is a long way to go, we will have to keep on exploring through this adventure. After 48 years of development, STVU is in its mid age and we are decisive with rich and valuable experiences to face and deal with our next challenges. Shanghai, a beautiful city, has provided STVU its life, its strength, its opportunities and courage. In return, STVU will be working hard for this beautiful city. Taking the philosophy: “For all learners, all for learners”, we will work together with all of you to create the glorious career of open education.

## **El Pasado y Futuro de las Universidades Asiáticas:**

### **Retos para China en el siglo XXI**

*The Past and Future of Asian Universities:*

*Challenges for China in the 21st Century*

Philip G. Altbach

*La globalización ha llevado a que los países asiáticos busquen transformar sus universidades en instituciones de clase mundial y que a la vez ofrezcan mayor cantidad de espacios para satisfacer las altas demandas. China busca esta masificación de la educación superior, pero a comparación de países con economías exitosas, China aún se encuentra muy por debajo en cuanto a la proporción de alumnos que admite en sus universidades.*

*Para China, el hecho de crear un sistema educativo de excelente calidad y masivo resulta una tarea sumamente difícil. Se necesita de gente con alta preparación que soporte este sistema. A la vez, se da una de las enormes fugas de cerebros en todo el mundo, pues China es de los países que más estudiantes exporta al extranjero para especializaciones o estudios de grado superior y son pocos los que regresan a su país.*

*Ante esta intención de crear universidades masivas y al mismo tiempo de clase mundial, se está tendiendo cada vez más a la privatización de la educación.*

1. The purpose of this discussion is to examine the Western university model and to analyze in light of Asia's higher education plans for the coming period.

a. Asia seeks to develop its university systems not only to provide greater access but also to create "world class" universities to match and to compete with academic institutions in the West. These two goals are not easy to reach, especially at the same time.

b. Asia's academic aspirations take place in the context of significant change and challenge -- higher education is much more influenced by international trends in a direct way than was the case in the past.

2. The change from the idea of higher education is a public good deserving of significant public support to the idea that it is a private good and that individuals should have considerable responsibility to pay for it. It is also a challenge to building world-class research universities that require public funds to develop.

a. The one exception to this generalization are the rise of the great private research universities in the United States, where wealthy individuals provided funds for the establishment of high quality universities -- as in the case of the University of Chicago, Stanford, and some others.

3. Entry into the highest levels of quality has become more expensive in the current period -- "world class" universities are complex and very expensive institutions. It is difficult to build one from the ground up.

a. Building world class universities in the 21st century is a much more difficult task than in the 19th century, when most of the universities now seen as world class grew to be universities that they are today.

b. Research universities are more complex, larger, and much more expensive than was the case in the past.

4. In the era of globalization, important worldwide trends affect the development of Asia's universities in profound ways. Academe is more affected by global trends now than was the case when the great universities were establishing. This also makes the development of higher education systems within a national context more difficult.

A. The key reality of the latter half of the 20th century has been massification—the dramatic growth in the numbers of students worldwide and in the proportion of the age group served by postsecondary education. The trend toward massification has been impossible to resist for both political reasons and because modern knowledge-based societies require larger numbers of skilled people.

i) The world's higher education systems have moved from elite to mass and recently to universal access. Countries have moved from enrolling 5 percent or under of the age group to 20 percent and now in many cases well over half. China is in the process of moving to mass enrollment, and remains at the lower end of enrollment patterns among countries with successful economies.

ii) The inherent conflict between access and quality is part of the massification phenomenon.

iii) Massification also creates the necessity for large and differentiated academic systems -- with institutions of higher education of varying quality, with different missions and goals, and with different patterns and levels of funding. This complexity is new to many countries but is inevitable everywhere. Examining how countries such as the United States, Germany, or others have dealt with this challenge may be useful.

iv) China's challenge to develop a differentiated and rational system of higher education to meet many different needs and population groups. In a country as large and diverse as China, the creation of a differentiated system that is effective is not easy.

1. Differentiation requires coordination and the ability to impose clear goals and missions on different sector of the postsecondary education system. It also requires a sense of what is best for the public good and for national development

2. Linking a coordinated system with a sense of institutional autonomy and competition is not an easy task.

3. It is clear that not all postsecondary institutions should be research universities -- there are many different populations and purposes to be served.

B. Globalization also affects Asian universities directly through the growing international market for highly skilled people. China, for example, is a major exporter of students, mainly for advanced study, and a large proportion of these students do not return to China. There are also many Chinese who are teaching and researching outside of China.

i) The brain drain, as it was once called, is now much more complex than it once was, and it is important to understand the nuances of this new situation.

ii) There is now more contact and interaction between scientists and scholars who work abroad with the home country.

iii) People who work in other countries often return home when the academic, political, and economic circumstances at home become favorable.

iv) The era of a globalization means that as Asian university systems develop, there will be more interactions among people from different countries -- and in the case of large countries like China and India, the balance of human resources will be negative for them.

C. Another challenge of globalization is that of distance education -- it is now possible for providers of academic programs to offer those programs worldwide, and it is possible for academic institutions to use curricular elements from abroad.

Some of the largest distance education institutions- in Turkey, India, China and several other countries, are mainly national institutions that serve national markets.

i) Some others are specifically marketed to an international audience and these are mainly headquartered in the industrialized countries.

ii) Inevitably, curriculum, methods, and degree structures from one country will be increasingly used in other countries through distance education.

iii) Issues of accreditation, standards, relevance, and the like will need to be carefully considered.

D. Another impact of globalization is the impact of the new world language, English. English is the main language of scientific communication, and it is increasingly important for teaching as well even outside of countries that traditionally use English.

i) In Asia, English is especially important despite the existence of strong and widely used indigenous languages. Chinese after all is spoken by the largest number of people in the world, and yet China has one of the largest numbers of English speakers as well.

ii) Asian countries have different approaches to using English.

iii) Singapore exclusively uses English in secondary and higher education

iv) Malaysia has had varying policies but increasingly accepts English

v) In India, a large minority of students study in English and there is resistance to moving academic programs to the regional languages

vi) Creatively using English but at the same time preserving the national language is a key challenge for Asian higher education in the coming period.

5. A historical perspective is useful to understand how Asian academic systems have developed over time. History affects universities and traditions remain important, even in a country like China that has made since 1952 several sharp breaks with the past.

a. Almost all Asian higher education systems stem from colonial traditions. The only exceptions are Japan and Thailand and to some extent China. The colonial experience has important implications for contemporary higher education throughout Asia.

b. It is interesting to look at the different policies of the colonial powers concerning higher education

i) In all cases, higher education was conducted in the language of the colonial power, and this has had implications to the present time.

ii) The British permitted a good deal of local initiative but dictated the organizational pattern of academic institutions - the British influence can still be seen in South Asia, but less so in Southeast Asia (Malaysia and Singapore).

iii) The Japanese established universities in Taiwan and in Korea and their impact, although supplanted by the United States, was influential during the period of early higher education development in those areas- the Japanese established academic institutions exactly like the ones they had developed at home.

iv) The United States, which became the colonial power in the Philippines following their defeat of the Spanish in Cuba, was active in building higher education institutions in English in the US "land grant" model.

v) The French, Dutch, and Portuguese were less active in terms of higher education development, but nonetheless had an impact.

vi) The development of universities in Japan and Thailand is particularly interesting since these countries had autonomy to choose their own academic models.

vii) Both chose foreign models rather than relying on existing indigenous institutions.

viii) Both chose to use the local languages rather than a foreign language

ix) The Japanese chose mainly the German model - Germany was harnessing higher education for national development and this appealed to Japan, with some American influences

x) Thailand looked to England and France more.

xi) The role of Christian missionaries through Asia is interesting in the early development of higher education

xii) The case of China is also very significant and interesting from a historical perspective.

xiii) Although China has a long history of advanced education -- China after all invented the examination system -- its contemporary higher education institutions are all in the Western model.

xiv) Foreign influences were strong in China, due to missionary activities as well as because of the impact of the European powers and Japan along the coast. Academic institutions in the Western model were established in the capital as well as along the coast at the end of the 19th century and the beginning of the 20th. These institutions came to dominate higher education in China.

xv) After the Revolution, the Soviet academic model was introduced into China.

xvi) A significant part of the story of the higher education development of Asian countries has been the struggle with and adaptation of colonial and foreign academic ideas and models.

6. The private sector has long been important in many Asian countries, and the private sector will continue to be important in the future as well.

a. Private higher education has a long history in Asia -- dating from the establishing of academic institutions in the region - some of these institutions have been related to missionary religious groups but in many cases not.

b. Several Asian countries today have a majority of enrollments in private universities -- including in South Korea, Japan, the Philippines, and recently in Indonesia, and also in Taiwan

c. In Asia, the bulk of funding for private higher education comes from student tuition and other private sources - with very little from government.

d. In some cases, some of the best universities are private - in the Philippines, south Korea and Japan this is the case- although the bulk of private institutions are at the lower end of the prestige and quality hierarchy.

e. In some Asian countries, there have been government controls over the private sector -- this shows that it is possible to have a strong regulatory regime for private institutions if that is considered to be important.

f. Clearly, private higher education institutions are an important part of the future of Asian higher education because the government is unable to absorb the costs of providing access.

7. The future of Asian higher education. The following trends will inevitably be part of Asia' s higher education future. They will play out in somewhat different ways in different countries.

a. Massification will continue and will, in countries where enrollment rates are still low by international standards, including China, India, Pakistan, Cambodia, Vietnam, and others, be the central reality of the coming period.

b. The emergence of national systems of higher education is related to the continuing impact of massification.

c. The impact of globalization in many different ways will continue to be a challenge -- including language, migration, and others.

d. Privatization of public universities and private higher education will continue to grow.

e. The impact of Information Technology in many different areas, including distance education, the management of institutions, scientific communication, and others will grow in importance.

f. Finding funds to pay for expansion in numbers and improvement of quality is a key challenge.

g. The academic profession is a central issue as well -- if universities are to be successful, the academic profession must be well trained and effective, and this is a major challenge.

i) Academic freedom is a central element in having an effective academic profession.

h. The role of research in higher education and in national policy is also of special importance in societies increasingly dependent on science and technology for the future.

Este proyecto impulsado por la Universidad de Columbia en Nueva York, Estados Unidos, tiene la intención de enlazar a varias universidades en todo el mundo a través de una clase impartida al mismo tiempo en donde pueden participar estudiantes de todas las Universidades en torno a los temas tratados.

El Global Classroom (Salón de Clases Global) está apoyado técnicamente por salas de conferencias y equipo multimedia de cada una de las Universidades participantes, entre ellos, el Center for New Media Teaching and Learning de la Universidad de Columbia.

El propósito de este nuevo modelo de educación a distancia no es simplemente utilizar la modalidad de videoconferencia, sino crear un ambiente similar al de un salón de clases, donde cualquier estudiante puede hacer preguntas acerca del tema y se genera una discusión en torno a cuestiones que necesitan ser abordadas desde una perspectiva global.

Este programa es una muestra de que las Tecnologías de la Información y la Comunicación sirven como una herramienta para el aprendizaje y la educación.

Entre las instituciones participantes en este programa recientemente iniciado a principios del año 2008, se encuentran la Universidad de Tsinghua y la Universidad de Negocios Internacionales y Economía (UIBE) en China. Además la Academy of Educational Development, Brandeis University (Heller School), Columbia University (SIPA), Emory University, Institute of Development Studies, Sussex, Secretaría de Energía de México, Monash University, Rensselaer Polytechnic Institute, Sciences Po, Siam University, TERI University, Tribhuvan University, Universidad Internacional Del Ecuador (UIDE), University of Buenos Aires, University of Ibadan, University of Malaya.

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<sup>32</sup> Para más información acerca de este programa: <http://ccnmtl.columbia.edu/projects/globalclassroom/index.html>



## **El enfoque chino**

### *The Chinese Approach*

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*China está esforzándose enormemente en el desarrollo de la educación a distancia basada en las TIC y en el aprendizaje virtual o a través de Internet (e-learning) como una vía para superar la creciente demanda en la educación superior y la necesidad de personal calificado en una economía que rápidamente se está expandiendo. En este proceso, el gobierno –particularmente el Ministerio de Educación- juega un papel fundamental de coordinación y volante.*

*Se describe el contexto general de estos nuevos desarrollos, de los retos que implican, las formas en que las TIC están involucradas en la educación a distancia en China, cómo están organizadas, operadas y el rumbo hacia el cual se dirige la educación superior masiva y el aprendizaje para toda la vida con el uso de las TIC.*

*De acuerdo con los autores, para aquellos países que se encuentran en un estado similar de desarrollo en estas áreas y en donde los gobiernos pueden jugar un papel similar, el caso de China puede ofrecer lecciones valiosas.*

## LIFELONG LEARNING FOR ALL IN A LEARNING SOCIETY

China, with its population of over 1.3 billion, is undergoing massive social and economic changes, moving from a planned to a market economy, pursuing rapid technological development and increasingly opening its doors to the outside world. As part of this process the Chinese government has embraced the vision of lifelong learning for all in a learning society. In China, in

accordance with the statement made by *the Report of the Sixteenth CPC's National Conference* (CCoCPC, 2002) and the *New Action Plan for Invigorating Education (2003-2007)* (MoE, 2003a), the lifelong education system will be combined with the national education system (i.e. formal education provided by various kinds of schools, colleges and universities, usually under the guidance of the MoE) to form a modern education system within a learning society in China as shown in Figure 6.1. Thus, lifelong learning is defined as an activity whereby individuals are able to choose learning resources and strategies based on their career requirements and personal needs, and to engage in learning at any time, in any place and with any curriculum. In the implementation of this vision of lifelong learning, ICT-based DE and e-learning are playing and will continue to play a key role. Since 1998, China has initiated two great programmes known as modern distance education and e-learning.

The term modern distance education (MDE) means the provision of ICT-based distance education using multimedia computer facilities and the Internet as the core technologies for off-campus learners. The term e-learning refers to the integration of ICT with curriculum reform and pedagogical innovation in teaching and learning for all sectors of formal education, continuing education, in-service training and lifelong learning. The term online education college (OEC) designates a college providing MDE programmes attached to campus-based universities.

Figure 6.1: Basic structure of a lifelong education system within a learning society

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are needed to see this picture.

MDE can be considered the latest of three phases in the Chinese system of distance HE. In the first phase starting in the early 1950s, DE was by correspondence; from the 1960s radio and

television began to be used; and the end of the 1990s saw the beginning of the use of ICT including Internet in HE. HE is one of the areas that are being affected by the new technology – including, of course, distance HE for the lifelong learner. At present, due to a shortage of education resources, only about 10 per cent of school-leavers can be enrolled in colleges or universities (DDP of MoE, 2003), and consequently there is intense competition for university places. For mature students wishing to study for degrees or diplomas, the opportunities are even more limited. In this situation MDE is believed to be a fast and cost-effective way to ease the pressure (Ding, 1994, 1995, 1999a).

As China proceeds to develop its capacities in this area, it has assigned a central steering and co-ordinating role to the state. Over the past few decades strategic guidelines for educational reform and development in China have been formulated at various political levels from the Central Committee of the Communist Party of China (CCoCPC) downwards, with the MoE having a key function in the process. For example, the *Action Plan for Invigorating Education towards the Twenty-First Century (1998–2002)* formulated by the MoE (MoE, 1998) pointed out that “extensive use of modern information technology in education will engender profound changes in the educational sector, and lifelong education will be a requisite condition for both educational development and social progress...”. The *Decision* made by the CCoCPC and the State Council (SC) (Chinese central government) at the Third National Meeting on Education in 1999 (CCoCPC & SC, 1999) reconfirmed that more importance should be attached to MDE. It should be thoroughly modernised, and the use of ICT in education should also be promoted (Ding, 1999b, 2001a). The government thus plays an overseeing and co-ordinating role, setting the overall guidelines and priorities for educational policy-making and striving to ensure that educational development proceeds in an integrated way with innovations in science and technology, economic growth and social change. Over the past few years, the Department of Higher Education of the MoE has issued a package of policies and regulations relating to MDE, including quality norms for MDE, criteria for the approval of OECs and local study centres, and measures to facilitate online registration, tuition, learning and credit recording. In addition the government promotes the building of adequate infrastructure, provides varying degrees of financial and technological support, deploys educational resources where they are needed and authorises corporate involvement in educational projects. Increasingly the Chinese government is working in

partnership with private- sector educational institutions and providers, both within China and internationally.

## THE RECENT DEVELOPMENT OF ICT-BASED MDE AND LEARNING

Before looking in greater detail at how ICT-based MDE and e-learning are organised in China, it may be useful to outline the current state of ICT provision in the country. Some 94 million people in China became Internet users by the end of 2004, according to the *Fifteenth Statistical Survey Report on Internet Development in China* by the China Internet Network Information Centre (CNNIC), published in January 2005 in Beijing (CNNIC, 2005), representing a yearly increase of 18.2 per cent since 1997. Among them, the number of broadband users was 42.8 million. In addition, the number of computer holders in China has risen to 41.6 million, an increase of 14.6 per cent over the past 6 months. The number of domain names and Web sites registered under “.cn” was 432,077 and then 668,900, increasing by 50,000 and 43,000 respectively within the period of six months.

Thus ICT and the Internet are taking an increasingly important role in modern Chinese society. Distance education and e-learning, along with other e-industries including e-commerce, e-publishing, e-advertising, e-entertainment and so on have all been developed rapidly in China. The *Report* mentioned above indicates that the Internet has become the main source of information for 98.5 per cent of all users. Despite these rapid advances, there is still a big digital divide between China and the major western developed countries. The International Statistical Information Centre (ISIC) of the National Bureau of Statistics of China (NBSC) published its *Research Report on Information Capacity Building in China* in 1999, included a ranking of 28 selected countries in the world. The US was ranked number one, Japan number two, and China was ranked last, just ahead of Pakistan (ISIC of NBSC, 1999). China, therefore, has a long way to go in regard to ICT capacity. In addition there is an internal digital divide within China, which will be mentioned later.

At present, China’s distance HE system has basically three components (Ding, 2001b, 2002):

1. Single-mode, which is provided through printed, audio-visual, TV-based and Web- based

transmission, run independently by a national system of RTVUs, with the CCRTVU as its headquarters.

2. Dual-mode, which is a mixed provision, offered by the regular, campus-based institutions of HE. It includes MDE, correspondence education and other modalities.

3. Consortium-mode, in which DE is provided by various kinds of consortia, e.g. partnerships between universities and IT companies, consortia of regular HEIs and joint provision by single-mode and dual-mode institutions. For instance, the National Networked Consortium for Teacher Education (NNCTE) and the National Networked Consortium for Agricultural Science and Education (NNCASE) were set up in 2003. Consortium-mode DE in its various forms is now a rapidly growing trend.

In September 1998, the MoE granted MDE licenses to Tsinghua University, Beijing Post and Telecommunication University, Zhejiang University, and Hunan University as the first batch of HEIs pioneering MDE. In the same year the number of students enrolled in MDE with these four universities reached 9000. In 1999 Beijing University and the China Central Radio and Television University (CCRTVU) were added to the pioneer list. By the end of 2003, the MoE had issued MDE licenses to 67 pilot campus-based universities as well as to the CCRTVU. There are 2347 study centres distributed all over the country covering 153 specialties from 10 study fields for 67 pilot universities. The CCRTVU, like other online education colleges, is moving to MDE at the same time. Since 1999, the CCRTVU has been providing MDE through 44 provincial RTVUs, 930 city branches and 2021 county-level sites and 22,237 study centres (ICEM of CCRTVU, 2003). In deciding whether HEIs should be granted MDE license within the pilot scheme, the MoE used five basic criteria. (1) The institution had to be a well established college or university with a high-quality teaching staff. (2) It needed to have a campus with good networking infrastructure. (3) It had to have good online teaching resources. (4) It had to demonstrate solid prior experience in using ICT in education. (5) It was necessary for the institution to submit a detailed and convincing plan for future implementation of MDE. The pilot universities in this initiative have been empowered with great autonomy in selecting students, deciding the level of enrolment, opening up new specialities, and issuing academic credentials acknowledged by the MoE. Currently, the MDE programmes are mainly offered at three levels: (1) undergraduate programmes; (2) postgraduate programmes for Master's degrees; (3) vocational diplomas (Zhang, 2004).

## THE LEARNERS

By the end of 2003, there were 2.3 million enrolments registered for MDE programmes in 68 pilot universities and some 90 per cent of them were in-service adult employees (Zhang, 2004). Table 6.1 shows the enrolments for MDE programmes in 68 pilot universities over the period 1999-2003.

Table 6.1: Enrolments for MDE Programmes in 68 Pilot Universities 1999-2003

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TIFF (Uncompressed) decompressor  
are needed to see this picture.

Of these students, 57.8 per cent are registered for undergraduate courses, 41.7 per cent for vocational courses, and only 0.5 per cent for postgraduate courses. According to the regulations on MDE issued by the MoE, the pilot universities have the autonomy to decide their own access policies. If they wish they can conduct a free entrance policy without any testing systems, only checking the applicants' graduation certificates from their senior secondary schools. However, most pilot universities have chosen some kind of entrance examination system. Some of them run independent testing systems; others do it collaboratively. A number of pilot universities ask the applicants to take part in the National Unified Entrance Examinations for HE organised by the MoE, one for regular HEIs and the other for adult HEIs. Generally speaking, students opting for an MDE course through an OEC of a pilot university have lower scores in the national examinations than those entering the same university to take on-campus courses.

## INVESTMENT AND COSTS

The MoE is in charge of the development of MDE. The strategy for developing MDE is characterised by government support in the initial stages and self-financing in the long run. Thus the MoE contributed 200 million yuan RMB for restructuring CERNet (Chinese Education &

Research Network) and CEBSat (Chinese Educational Broadcasting satellite), and 40 million yuan RMB for developing Web-based resources of more than 300 online courses to support the pilot programme of MDE by the end of the 1990s. In addition, the CRTVUs' system had contributed 3 billion by the end of 2003. Later on, the OECs of 68 pilot universities (including CCRTVU) run the MDE programmes on a self-financing basis. The main revenue comes from tuition fees from students. There are basically two systems of tuition fees. One is credit-based, the other is year-based. On average, tuition fees range from 80-150 yuan RMB (approximately US \$9.6–\$18) per credit or 3000 – 12000 yuan RMB (US \$363 – \$1452) per year. Some universities have adopted a special policy by which tuition fees for learners in Western China, for example, were only half of those charged in Eastern China. However, generally speaking, the tuition fees for MDE learners are higher than for those studying on-campus in the same universities. The reason for this is partly because universities are able to obtain revenue from central or provincial government budgets for on-campus learners, but not for MDE learners.

In the case of the 68 pilot universities, most of these co-operate with companies and social organisations in developing their MDE programmes. Furthermore, since corporate involvements were permitted by the MoE, there have been more than 1840 million yuan RMB (US \$222.5 million) invested from social capitals. The CCRTVU and its partner for providing Internet services have invested a total of 3000 million yuan RMB (US \$363 million) for the information infrastructure (Zhang, 2004). In addition to the pilot universities, numerous IT companies and e-learning Web sites have been initiated. Although these are not authorised to award degrees or diplomas in higher education, they provide a wide range of training programmes for in-service learners and also play a valuable role in the technological development of e-learning systems.

## INFRASTRUCTURE DEVELOPMENT

The rapid development of e-learning as a major part of higher education in China is heavily dependent on the advancement of the e-learning infrastructure and has benefited greatly from government policies targeting e-learning development, including support for MoE-initiated projects. In addition, e-learning development has increasingly involved co-operation with enterprises in the private sector, and most of the e-learning program providers have benefited

from such co-operation. The e-learning infrastructure consists of: (a) a national network acting as a backbone structure for the delivery and sharing of learning resources; (b) the broadcasting network using a mixture of new and more traditional DE technologies and serving as an important resource for undeveloped areas; (c) the campus network of e-learning sites.

As the backbone of e-learning resources delivery, the China Education and Research Network (CERNet), which started in 1994, has reached 2.5-GB wideband for stem links. Figures for 2003 indicate 1200 universities with 30 million users connected across 220 cities. Meanwhile, CERNet2 has been running on a pilot basis. The blend of relatively traditional DE technologies and e-learning is proving especially useful for the delivery of e-learning resources to far-reaching areas. For example, the China Education Broadband Satellite (CEBSat) provides 8 TV channels, 8 voice channels and 20 IP data channels for e-learning delivery.

The campus networks constitute the main e-learning sites across the country and are able to function as virtual universities through the use of the CERNet. Since the Digital Campus Project was initiated by MoE in 2001, more than 1200 universities/colleges have built campus networks, and 80 per cent of universities are connected with CERNet. Various educational institutions have also built school or classroom networks, which are connected with CERNet. As for the undeveloped areas, especially in Western China, there are special funds available for educational institutions to build campus networks as e-learning sites, in order for them to join the e-learning system. This is an example of a policy that is playing an important role in bridging the digital divide.

## DELIVERY AND LEARNING MODELS

In the third phase of distance education, e-learning in China is blending ICT with traditional DE technologies. The main e-learning delivery media include Internet, satellite, broadcasting and television systems, CD-ROM and even printed materials. For example, the e-learning system of the CCRTVU is shown in Table 6.2 (Zhang, 2004).

Table 6.2: The e-learning systems of the CCRTVU

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are needed to see this picture.

Commensurate with the diversity of delivery methods, the learning models used are also diverse. Basically, two instructional delivery models are popularly adopted, one is the remote classroom teaching model, and the other is the autonomous learning model. In the remote classroom teaching model, an instructor gives a presentation on campus and the presentation is delivered to remote learning sites through digital satellites or an interactive video conferencing system. Meanwhile, students at remote learning sites watch and listen to the presentation, ask questions, and get immediate feedback from their nearest learning sites. Furthermore, the remote classroom teaching model is accompanied with asynchronous discussions among students and/or between students and the instructor. Learners can also browse learning resources, take online quizzes and submit assignments through the network. The staff in local learning sites are responsible for technical support, practical supervision, and the organisation of final examinations. In the autonomous learning model, the course presentations are pre-recorded on CD-ROMs and then mailed to the remote learning sites or learners directly. Similarly, learners can have online discussions with their peers and/or instructors.

Apart from the presentations through broadcasting and CD-ROM, group learning and face-to-face tutorship are also important learning models. According to a recent survey, more than 90 per cent of e-learners have the opportunity to acquire a face-to-face tutor, and more than 80 per cent have at some time taken part in learning groups.

## THE MOE-INITIATED PROJECTS

As previously mentioned, the MoE has launched a series of national projects in the recent years

to promote the development of e-learning in China. These range from infrastructure development and technology to the content of e-learning resources and curricula. This section briefly describes some of these projects.

### The MDE Project

This project, initiated by the MoE in 2000, includes four sub-projects:

- Online course construction for higher education: The primary goal of this sub-project is to build up approximately 200 online courses, as well as their supporting case bases and test bases in two years. These online courses can be accessed and utilised by both learners and teachers at a distance. The cases can be used as study examples, and the tests are for learners' online practice and diagnosis. The first pilot started in 2000, and since then 321 online curricula have been developed. The second round started in 2003 with a target to develop 1500 high-quality online-curricula by 2007. Meanwhile, 10,000 teachers have been trained in the development of online curriculum. To date, 68 cyber-education institutions have developed more than 9338 online courses.
- Online educational resource construction for adult education. This sub-project aims at collecting, designing and developing online educational resources, as well as providing instructional support and management for adult education.
- Online education resource construction for basic education. This is an initiative to develop two complete online courses (English language and information technology) and case bases for other subjects. A resource gateway for basic education will also be established.
- Online training for in-service school teachers. The main objective of this sub-project is to develop 35 online training courses and their supporting materials for in-service school teachers.

More detailed information regarding the modern distance education project can be found on the Web site: [www.cde.edu.cn/](http://www.cde.edu.cn/).

### The e-Learning Technology Standardization Project

Hundreds of ICT companies are competing in the Chinese e-learning market. Consequently, many e-learning systems developed by various educational companies are experiencing

difficulties in sharing resources and harmonising their systems owing to the different technological standards used. In 2001, the Chinese e-Learning Technology Standardization Committee (CELTSC) was established, which is responsible for developing a standardised framework for e-learning technology systems. Thirty target standards have been proposed for the framework and eleven specifications have been published by the CELTSC. More information regarding the CELTSC and the project can be found on the web site: [www.celtsc.edu.cn/](http://www.celtsc.edu.cn/).

#### The Digital Museum Project

This project was initiated by MoE in 2001, with the aim of creating shared digital museum resources, bringing together universities with particularly useful collections, such as Beijing University of Chinese Medicine for herbal resources, Beijing University for geological resources, Tsinghua University for art resources, Shandong University for archaeology resources and so on. Museums are an important university feature and play a significant role in teaching, learning and scientific research. The Digital Museum Project will support the digitalisation of these museums. To date, 18 Web-based museums have been established, which can be accessed through links available at: [www.edu.cn/20020118/3018035.shtml](http://www.edu.cn/20020118/3018035.shtml).

#### Key Technologies for e-Learning Project

This project was initiated by the department of science and technology of the MoE in 2001 to develop a holistic e-learning technology facility. Its functions include tackling key problems, developing application systems and constructing e-learning demonstration. Many key developments for e-learning have been tackled in this project. They include linking up wire and wireless networks and integrating the two basic platforms of CERNet and CEBSat. Using this integrated platform, a holistic e-learning system has been constructed, in which synchronous teaching, asynchronous teaching, a learning management system, an e-education charging system, a testing management system and an educational resources management system are all interoperated harmoniously. As for the demonstration of e-learning systems, there has been a fruitful co-operation between Shanghai JiaoTong University, Xi'an JiaoTong University and Zhengjiang University, which started in June 2002, to facilitate mutual access to courses, credit recognition and the sharing of learning resources. Up to now 54 shareable courses have been

developed in these three universities, benefiting thousands of students on and off campus. Furthermore these kinds of high quality resources have been made accessible free of charge to the Western universities, such as Xinjiang University and Ningxia University. More detailed information about the Key Technologies for e-Learning Project can be found at [www.cutech.edu.cn/chengguo/introduction/jihua/JP/default.asp](http://www.cutech.edu.cn/chengguo/introduction/jihua/JP/default.asp).

## PROBLEMS OF E-LEARNING

While it is clear that e-learning in China is playing a key role in meeting the demand for higher education, it is necessary to recognise that it involves certain problems relating to learners, teachers, learning resources and education quality.

### Learner isolation

To most of the e-learners this is the last chance for them to receive higher education. A typical comment that one hears is: "I had to opt for cyber-education as I got a lower score in the national exam for university entrance." Clearly it will take some time for e-learning to become fully accepted alongside the more traditional forms of learning and for e-learners to develop the sense of belonging to a learning community. Other problems that they typically have to overcome include loneliness and lack of self-motivation. Some information work is therefore necessary to improve understanding of e-learning and remove misconceptions. At the same time e-learners will need to have access to appropriate advice and assistance in making the best use of the system.

### Inexperience of teachers

Among teaching personnel there is a widespread lack of understanding about e-learning and how to design and conduct ICT-based courses. Unaware that the new media demand innovative approaches and new teaching methods, many instructors simply make the lectures or other learning materials available on a server and leave the students to manage the online learning as best they can. Here again, much information and training work is necessary to create an adequately prepared teaching force.

### Lack of quality resources

There is also a lack of materials suitable for online learning. In the absence of a learning community, face-to-face interaction, live discussion and so on, the learning resources should be specially designed to facilitate e-learning. Furthermore, other mechanisms should be integrated into the learning system to permit online discussion and create virtual learning communities. In addition, a lot more work should be done to promote the sharing of high-quality learning resources. As to the infrastructure resources on the learners' side, there is still much to be done in the area of network connection. Not all e-learners have adequate facilities to learn online at home, often lacking appropriate computers or wide-band network connections.

### Difficulties of quality assurance

While e-learning is reaching out to increasingly large masses, it is important to pay attention to the qualitative as well as the quantitative aspect. While there are effective MOE regulations governing the quality of MDE for most of the pilot universities, some institutions tend to neglect the quality of teaching and learning. In dealing with this question it has to be recognised that the quality of learning for online students is in many ways different from the notion of quality that applies in traditional learning. How to define the quality of e-learning is, therefore, a challenge for e-learning institutions. Equally difficult problems are involved in the practical application of quality assurance, especially at a time of rapidly expanding enrolments in e-learning.

## BUILDING A HOLISTIC LIFELONG LEARNING SYSTEM

The above-mentioned problems can best be solved within a holistic learning system embracing all phases of life, all sectors and all levels of education. Such a system would include a kind of "learning supermarket" where e-courses and other learning resources are stocked and shared, and where learners can choose courses and engage in learning, take part in tests and obtain credits. The different institutions involved in the system would be encouraged to work together so as to achieve optimum use of resources – for example, by setting jointly agreed quality standards, providing integrated e-library facilities and creating effective assistance and consulting services for learners. E-learning should be presented not as a complete alternative to campus-based formal education, but rather as a good modality for adult education and as one constituent in a lifelong

learning system. Promoting this concept of e-learning would do much to remove the misunderstandings about lifelong learning that are common among both learners and teachers. The development of e-learning within such a system will demand heavy investment. Government involvement will provide the basic infrastructure and network connections, and will carry out the basic work on accreditation, regulation and standardisation, to ensure educational quality. Public and private-sector capital will join with the e-learning institutions to develop high quality learning resources, and with the introduction of market mechanisms, more learning opportunities will be available for the low-income populations.

The development of standards-based resources is a key factor. The sharing of resources depends on the standards on which the resources are based. The framework of Chinese e-Learning Technology Standards has been established and will serve as a basis for further work in this area. Standards should also be applied in the building of e-learning resources.

These goals should be linked to an international vision of e-learning. International co-operation and communication should be emphasised, especially in the development of e-learning standards, the fostering of a new e-learning culture, and the advancement of e-learning technologies. Furthermore, co-operation in e-learning provision also should be considered. China will thus play its full role in promoting a global as well as a national strategy for lifelong learning.

## POLICY CONSIDERATIONS

- **Infrastructure:** The example of China demonstrates how the government, through the MoE, can play a vital role in ensuring the development of an adequate and internally compatible infrastructure. The plan for such an infrastructure needs to be established at an early stage in the country's development of its ICT system.

- **Further role of the government:** The example of China also demonstrates how the government, through the Ministry of Education, can facilitate the development of e-learning through national projects, the content of e-learning resources and curricula, and the enabling technologies for e-learning. The government also plays the key role in e-learning resources accreditation, regulation and standardisation, to ensure the education quality.

- **Promoting synergy between universities:** Here again the Chinese example shows how the government can play a useful role by encouraging universities to co-operate and assist each other in their e-learning programmes by, for example, sharing research material posted on the Internet and providing access to each other's courses. A good example is the National Networked Consortium for Teacher Education (NNCTE), launched in 2003, which involves eight universities that have come together to provide teacher training through e-learning. More than 1000 courses are shared online.
- **Training of teachers:** The provision of training schemes for teachers is essential to an adequate functioning of ICT-based education. The Chinese example shows that, in a holistic e-learning system, teacher training should be taken as an integrated part, including the basic ICT skills, and especially the instructional design of e-courses
- **Outreach to learners:** As the Chinese experience demonstrates, many learners are ill-formed about e-learning or have a resistance to it. Those who attempt it often experience difficulties in getting used to it. Expansion of ICT-learning provision needs to be accompanied by public information about it and by providing counseling, help and support to students.
- **Outreach to less-developed areas:** As for the campaign to reduce the internal digital divide, the case of China illustrates the importance of this and provides some examples of workable ways of bringing e-learning infrastructure and content to the less-developed areas
- **Co-operation between government and the private sector:** What China's experience can teach in this area is to provide opportunities for the private sector to invest in e-learning resources building. This co-operation can also be important in the field of research, where the development of new technologies will benefit both sides of the partnership.

## ACRONYMS AND ABBREVIATIONS

CCoCPC Central Committee of Communist Party of China  
 CCRTVU China Central Radio and TV University  
 CEBSat China Education Broadband Satellite  
 CELTSC Chinese e-Learning Technology Standardization Committee  
 CERNet China Education and Research Network  
 CNNIC China Internet Network Information Centre

DE Distance Education  
DDP Department of Development and Planning  
HE Higher Education  
HEIs Higher Educational Institutions  
ICEM Information Centre for Educational Management  
ICT Information and Communications Technology  
ISIC International Statistical Information Centre  
IT Information Technology  
MDE Modern Distance Education (ICT-based Distance Education)  
MoE Ministry of Education  
NBSC National Bureau of Statistics of China  
NNCTE National Networked Consortium for Teacher Education  
NNCASE National Networked Consortium for Agricultural Science and Education  
OEC Online Education College  
RMB Renminbi (Chinese currency, yuan in unit)  
RTVUs Radio and TV Universities  
SC State Council (Chinese Central Government)

#### RELEVANT INTERNET SITES

CCRTVU Online: [www.open.edu.cn/](http://www.open.edu.cn/)  
China Central Radio and TV University: [www.crtvu.edu.cn/](http://www.crtvu.edu.cn/)  
China Education and Research Network: [www.edu.cn/HomePage/english/index.shtml](http://www.edu.cn/HomePage/english/index.shtml)  
China Education and Research Network - CERNET:  
[www.edu.cn/HomePage/cernet\\_fu\\_wu/index.shtml](http://www.edu.cn/HomePage/cernet_fu_wu/index.shtml)  
China Education and Research Network – e-Learning:  
[www.edu.cn/HomePage/jiaoyu\\_xinxi/index.shtml](http://www.edu.cn/HomePage/jiaoyu_xinxi/index.shtml)  
China Education and Research Network – China Education – Higher Education:  
[www.edu.cn/HomePage/zhong\\_guo\\_jiao\\_yu/jiao\\_yu\\_yan\\_jiu/gao\\_deng/index.shtml](http://www.edu.cn/HomePage/zhong_guo_jiao_yu/jiao_yu_yan_jiu/gao_deng/index.shtml)  
China Education and Research Network – China Education – Distance Education:  
[www.edu.cn/HomePage/zhong\\_guo\\_jiao\\_yu/jiao\\_yu\\_yan\\_jiu/yuan\\_cheng/index.shtml](http://www.edu.cn/HomePage/zhong_guo_jiao_yu/jiao_yu_yan_jiu/yuan_cheng/index.shtml)

China Online Education – China Distance Education:

[www.chinaonlineedu.com/media/zx\\_dis\\_01.asp](http://www.chinaonlineedu.com/media/zx_dis_01.asp)

China Online Education – Networked Education Colleges:

[www.cer.net/HomePage/cer.net/jiao\\_yu/gao\\_kao/zhuanti/wangluo/index.shtml](http://www.cer.net/HomePage/cer.net/jiao_yu/gao_kao/zhuanti/wangluo/index.shtml)

China Education Television: [www.cetv.edu.cn/](http://www.cetv.edu.cn/)

China Internet Network Information Centre: [www.cnnic.net.cn/en/index/index.htm](http://www.cnnic.net.cn/en/index/index.htm)

Chinese e-Learning Technology Standardization Committee: [www.celtsc.edu.cn/](http://www.celtsc.edu.cn/)

Chinese Journal of Distance Education: [www.chinadisedu.com/](http://www.chinadisedu.com/)

Chinese Journal of Educational Technology: <http://cet.hedu.net/>

Chinese Journal of Educational Technology Research: [www.etr.com.cn/qikan/dhjyyj.htm](http://www.etr.com.cn/qikan/dhjyyj.htm)

CRI Online: <http://en.chinabroadcast.cn/>

Key Technologies for e-Learning Project:

[www.cutech.edu.cn/chengguo/introduction/jihua/JP/default.asp](http://www.cutech.edu.cn/chengguo/introduction/jihua/JP/default.asp)

Ministry of Education of People's Republic of China: [www.moe.edu.cn/](http://www.moe.edu.cn/)

MoE of China – Policies and Regulations:

[www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=221](http://www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=221)

MoE of China – Literature:

[www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=206](http://www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=206)

MoE of China – Policies and Regulations:

[www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=221](http://www.moe.edu.cn/eduoas/website18/level2.jsp?tablename=221)

National Networked Consortium for Teacher Education: [www.jswl.cn/](http://www.jswl.cn/)

National Centre for Educational Technology: [www.ncet.edu.cn/](http://www.ncet.edu.cn/)

National Networked Consortium for Agricultural Science and Education:

[www.uast.com.cn/](http://www.uast.com.cn/)

National Bureau of Statistics of China: [www.stats.gov.cn/english/index.htm](http://www.stats.gov.cn/english/index.htm)

People's Daily Online: <http://english.peopledaily.com.cn/sci-edu.html>

The Digital Museum Project: [www.edu.cn/20020118/3018035.shtml](http://www.edu.cn/20020118/3018035.shtml)

The Modern Distance Education Project: [www.cde.edu.cn/](http://www.cde.edu.cn/)

Xinhua Online: [www.chinaview.cn/](http://www.chinaview.cn/)

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## **Reforma y Desarrollo en la Educación Abierta y a Distancia de China**

*Reform and Development in China's Open and Distance Education*

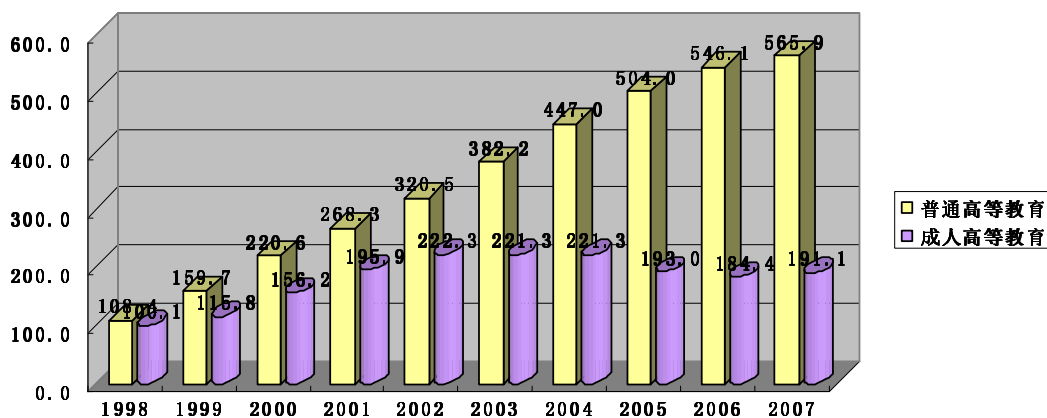
Yan Jichang

*La tecnología de la información se ha convertido en una de las principales fuentes de productividad en china. El rápido desarrollo de su economía y de la industria de la información demuestran claramente el papel clave que el uso de las tecnologías de la información tienen para la estimulación de la industrialización en la creación de una sociedad próspera. Internet, como un logro tecnológico sobresaliente, ha transformado de sobremanera la forma de vida. Acompañada del desarrollo de Internet, la red de educación abierta y a distancia no solamente ha mejorado las herramientas de aprendizaje utilizadas en los modelos tradicionales, sino que también se ha transformado en una importante modalidad educativa que evidentemente jugará un papel transcendental en el progresivo desarrollo de una sociedad del conocimiento y un sistema de aprendizaje para toda la vida.*

The base for distance and open education

China's higher education system, mainly consists of the general higher education and adult higher education. While there were great differences between these two higher education in terms of enrollment requirements and graduation certificates, adult higher education an important part of chances higher education, had strengthened and broadened post-secondary educational channels and opportunities and therefore provide a good and extensive service to the economic and social development of the society in the last century In a decade from 1998, China's regular higher education after several years of continuous expansion has achieved a big development. In 1998, college enrollment reached 1,084,000 and in 2007 the enrollment has reached 5,659,000 people, which is 5 times that in 1998, and there is no longer an age restriction on students. Figure 1 describes the general situation of higher education enrollment:

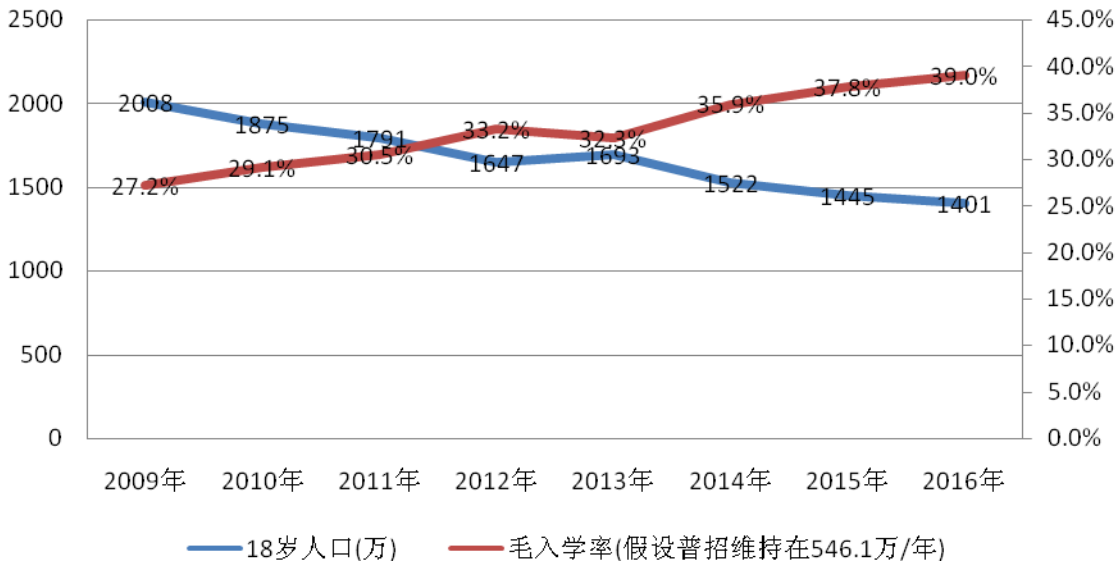
图1 1998-2007年普通高等教育、成人高等教育招生人数图  
单位:万人



### The fast development of Chinese higher education

General popularization of higher education makes the gross enrollment rate of higher education grow from 9.8 percent in 1998 to 23 percent of 2007, and the good trend of rapid growth will remain. From China's 18-year-old population trends, if the annual regular higher education enrollment maintain the number of 5,461,000 in 2006, then in next decade, the gross enrollment rate of higher education will reach 39 percent in 2016. Figure 2 shows an estimate on the development trends of gross enrollment rate of china's higher education according to China's 18-year-old demographic changes:

图2 普通高等教育毛入学率发展趋势分析



Growth rate of gross enrollment rate of higher education in economically developed regions and cities was significantly higher than the national average. Taking 2007 as an example, the higher education gross enrollment rate for Jiangsu Province is 37%, 38% for Zhejiang Province, Shanghai was 65%, Tianjin and Nanjing reached 55 percent; in 2006, Guangzhou, Shanghai, Beijing, Tianjin, Nanjing and other major city's higher education gross enrollment rate were all over 50%. The implementation of China's family planning policy has resulted in a significant change in population age structure. In 2008 China's 18-year-old population is 26.21 million. By 2015 this number will be reduced to 14.45 million. Under such circumstances, people's demand for quality higher education has an unprecedented increase. For example, in Beijing in 2006 there were 2 million students who failed the exam chose to retake the entrance examination next year, an increase of 25% compared to the previous year. The higher demand for quality higher education has created a new age for china's higher education.

Along with the rapid growth of regular higher education, the complementary role of adult higher education has been significantly weakened. There has been a very slow growth in adult students in higher education, the number of schools enrolling adult students is also quickly declining. In 1998 there were a total of 962 adult colleges, in 2007, only 413, while regular colleges and universities reached 1908. Adult higher education entrance exam is gradually losing significance in selecting students, while the admission requirement point has become very low. However, despite the the shrinking size of adult higher education, there is still strong potential

students in short term. Through an analysis on the 15-year-old population, the gross enrollment rate of senior high school and the 18-year-old population, and the net enrollment rate of higher education, we can see in Table 1, the potential of adult higher education students is still a relatively objective figure. Using 2007 as an example, high school graduate population was 12,092,300, and the number of regular higher education enrollment was 5,782,200, then the potential of adult higher education students could reach 6,310,100.

### Rapid growth of the Internet in China

The latest report on China's Internet development shows that by the end of June 2008 the number of netizens in China reached 253 million, which was increased by 91 million people, an increase of 56.2 percent, comparing to 2007, and ranks first in the world. The scale of Internet users continues the trend of sustained and rapid development. More and more people recognize the convenience of the Internet. As the cost of Internet access and devices continue to fall and people's income improves, the Internet is gradually going into tens of thousands of households. 28.9 percent of Chinese netizens , 73.05 million users, in the first half of 2008 have surfed the Internet through mobile phones, which has become an important Internet developing direction. The main body of Chinese Internet users is still the youth of 30-year-old and under, accounting for 68.6 percent of Chinese netizens. From the academic qualification point of view, the proliferation of the Internet shows a downward trend. With the gradual expansion of the size of Internet users, the academic structure of Internet users are gradually moving close to the Chinese academic structure of the total population, which means Internet is becoming more and more popular.

Nowadays, there are 84.70 million home computers, only in the first half of 2008 there was an increase of 6.7 million units, half-year growth rate of 8.6 percent. The proportion of home Internet users continues to rise, from 67.3% in December 2007 to the current 74.1 percent. Internet access conditions have a great improvement with the average online time of 19 hours per week. In the Internet-based resources sector, domain names have reached 14.85 million, an annual growth rate of 61.8%. The annual growth rate of the number of IPv4 address is 33.7%; on the basis of information resources sector, the website number is 1,919,000, an annual growth rate of 46.3% , the increase of the number of Web sites shows that China's Internet information resources become richer.

Higher Education and the development of the Internet has laid a solid foundation for the development of Open and Distance Education

The increase of gross enrollment rate of higher education, especially that in the urban areas, had laid a sound foundation for continuing education and non-diploma education. From the experience of developed countries, the more advanced higher education is, the more advanced continuing education is. People will not only attach importance to education diploma. In the less developed stage of higher education, the focus of China's higher education was on the academic and diploma education. "diploma fever" has always been a social pursuit of the "golden pastry." When entering into the popular stage of higher education, despite that adult education for diplomas, for a period of time, will still be in the dominant position, non-diploma education that focus on quality and ability will become a development trend.

China has put forward a social goal of "building of a learning-oriented society" in which life-long education system is the cornerstone of a learning society. Continuing education has become the main body of lifelong education system, and non-diploma education and training will become the main form of continuing education. Open and Distance Education has already contributed to the popularization of higher education, and it will continue to play a greater role in non-diploma education and training as well as in continuing education.

Analyzing the evaluation by netizens on the Internet, the highest score, 68.6%, is on that the Internet can improve and rich people's entertainment, which is followed 68.1% on that the Internet can help people's work and learning . Majority Internet users have become accustomed to a life with the Internet. They "feel that they can not live a life without the Internet."

The development of a rational user's structure and the improvement of Internet infrastructure provide a wide range of social infrastructure and resources to the development of modern distance education and continuing education.

China advocates the development of Open and Distance Education

Modern Distance Education is a new type of education accompanied by the development of modern information technology, which is the major means to build up a life-long learning system in the era of knowledge economy. Taking full advantage of modern information technology,

implementing "Modern Distance Education Project" on the basis of original long-distance education system, can effectively make use of advantages of variety educational resources. It is in line with the world development trend of science and technology education, the strategic measures to promote education in China under the condition of shortage of educational resources.

#### China starts the implementation of "Modern Distance Education Project"

In 1998, the State Council promulgated the "Facing the 21st Century Education Development Plan", the "implementation of modern distance education project, the formation of an open education network, building a lifelong learning system, establishing and improving the continuing education system to meet the needs of life-long learning and knowledge updating" was put forward. Colleges and universities were encouraged to provide continuing education courses, to construct continuing education bases. Meanwhile, Universities and colleges should rely on the modern distance education network to provide high-quality courses, and organize national top-level teachers to teach, and share educational resources, and also provide a wide range of continuing education courses. to industry managers and professionals.

In 1999, the Ministry of Education officially launched "Modern Distance Education Project." Since March of 1999, the Ministry of Education has approved 69 universities as the pilot sites for modern distance education, including 68 colleges and universities and a Radio and Television University. In 1999, Tsinghua University, Zhejiang University, China Central Radio and TV, those five schools was approved as the first batch of pilot colleges and universities, after which the Ministry of Education has approved Peking University, Beijing Normal University and other 26 as pilot colleges and universities in 2000, and in 2001 Xiamen University, Harbin Institute of Technology and other 14 pilot colleges and universities, and Dalian Science and Technology and other 22 colleges and universities in 2002. These pilot colleges and universities open to full time workers and professionals, which has pioneered China's modern distance education and accumulated a lot of experiences.

#### China's development of modern distance education

By the end of 2007, the pilot schools had enrolled a total of 6,700,000 students, in which there were 3.2 million and 6.7 million in school, and among which 86.51% were full-time professionals. In 2007 the total number of students was 1.35 million, in which 40% were enrolled by general higher education colleges and universities. China's modern distance education is composed mainly of diploma education. Up to the end of 2006, the pilot colleges and universities had opened a total of 299 categories, 1560 kinds of majors, covering management, economics, education, literature, law, engineering, pharmacology, agriculture, medicine, philosophy and other altogether ten categories. In addition, the pilot colleges and universities had also opened some new majors such as e-commerce to cope with new economic development. In 2006, the pilot colleges and universities provided non-diploma education and training program to 3,45 million people from more than 20 industries.

Pilot colleges and universities have established out-of-school learning centers across the country. By the end of 2007, there were about 9000 out-of-school learning centers, in which there were 3292 RTVU teaching spots, 4583 college and university out-of-school learning centers, and 1352 in the public service system. The western areas have 560 out-of-school learning centers, accounting for 16 percent of the total numbers, which provide rich educational resources to western regions.

Over the past decade, China's modern distance education pilot has made great progress. Modern Distance Education has contributed to the improvement of the net enrollment rate in higher education, which has promoted the popularization process of higher education in China. It also has facilitated the informationization of china's higher education through information technology application and promotion. Meanwhile, through a new education teaching mode, it has promoted the reform of higher education in China, providing learning opportunities and convenience for full-time employees, which has helped to a lifelong learning-oriented society.

At the same time, the development of modern distance education has been accompanied by problems and challenges, which are mainly reflected in such aspects: (1) diploma education and non-diploma training did not achieve a balanced development, which can not meet the learning needs of the community. Popularization of Higher Education makes the scale of adult education and compensatory education getting smaller and smaller. In a life-long education system , skills-based education and training are in need. (2) "to standardize management, to

strengthen services, and to improve the quality " has always been the foundation for the survival and development of distance education. Pilot schools can have autonomy in areas like enrollment proposition, organizing students to take examinations to determine the enrollment, training period and validity of academic credits, which has set higher requirements for quality modern distance education colleges. Supporting poverty-stricken areas and ethnic minority areas has always been an important task for distance education. Through modern distance education, high-quality educational resources can be offered to the western regions, which is more than through any other forms of education.

#### Development plan for distance education

The concept of a learning society was originated from a famous American educator, former president of the University of Chicago Professor Hutchins (RMHutchins) in 1968 in his book "learning society". Since then, the international community has conducted extensive research on a learning society, a learning society is a society with an ideal and convenient learning environment in which learning has become a basic right and lifestyle for every citizen, family, organization, community and government, and learning is a basic way to improve living standard and to achieve success.

#### Learning-oriented organization and community

In December 2003, Hu Jintao pointed out at the national working conference on human resources that "the whole society should further establish the concept of lifelong learning, encourage people to participate in lifelong learning through various forms and channels, further reform and develop adult education, strengthen all kinds of talent training and continuing education, improve multi-level education and training network, and actively promote the building of learning organization and learning-based community, and build a life-long education system with Chinese characteristics. " Life-long education is a completely different from the traditional educational philosophy of education and educational methods, it breaks through the limitations of school education, which enables education to be extended to one's life and social organizations, and provides learning opportunities to for every member of society. In such a society, every

citizen is not only the object of study but also the main body of learning, with a wide and equitable access to education.

Building a learning-oriented society needs all people's participation and full-time employees' lifelong participation. It is widely expected that people can have part-time study chances, can have more access to education, can enjoy equitable and order education environment without discrimination. Open and Distance Education with many advantages such as the temporal and spatial separation, three-dimensional education system, abundant learning resources and network becomes an effective approach to carry out this goal.

## Contactos

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