GLOBAL TRENDS IN HIGHER EDUCATION, ADULT AND DISTANCE LEARNING

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ICDE ENVIRONMENTAL SCAN

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INTRODUCTION

Reflecting its roots in distance education, the International Council for Open and Distance Education (ICDE) was, until 1982, known as the International Council for Correspondence Education. However, distance education has undergone a significant transformation from its origins in independent or correspondence study. Until recently, that transformation has been best characterized by the creation and growth of more than 50 open universities since the 1970s.[1] Open universities may be viewed, from many respects, as forerunners in tackling the challenges that now confront higher education systems worldwide.[2]

In addition to the growth of open distance learning universities, however, we are now witnessing the growth of corporate involvement in education, including distance education. Pearson plc, an international media company and world leader in educational and consumer publishing, is but one example. In the last few decades, the *open* and *distance* concepts of education have also spawned or resonated with other movements which have created their own terminology, some drawn from popular culture (e.g., the knowledge society, the new knowledge economy, open courseware, open source, wikieconomics, and technology enabled learning).

Embedded in all of these concepts and, it could be argued, emerging from them is the belief that access to knowledge and learning is a universal right, one of the key rights of the global community. In fact, knowledge is increasingly regarded as the solution to individual and collective social and economic problems: it has become a new global religion. However, this new solution may soon be embroiled in the inevitable discussions of *the new knowledge imperialism* and *the new marginalizations*.

[1] Evans, Haughey, and Murphy, "Introduction."
[2] Peters, "Transformation through Open Universities."

According to ICDE President Frits Pannekoek,[3] those who are successful in the new global knowledge economy may harvest great wealth and exert an inordinate influence on the world's future. Ensuring equity, ensuring respect for all cultures, ensuring that everyone has access to learning, ensuring that economic opportunity is open to all, and ensuring that the planet survives the economic and technological struggles among regions, nations, and the corporate sector represent, he argues, the great challenges of the coming decades. Pannekoek regards the distance, open, and technology enabled learning movement as one of a few movements that show a convergence of interests and knowledge that might be capable of meeting these challenges. But the questions, he believes, are as profound as the hint of solutions:

- How can worldwide equity of access be ensured?
- Can technology respect unique cultures?
- How can the tension between the need to create economically sustainable systems and the need for shareholder return on investment, which so dominates capitalist societies, be reconciled?
- How will the resolution of these issues affect the ownership of knowledge?
- How will the World Intellectual Property Organization (WIPO) and regional economic alliances affect open learning?
- How can open learning be reconciled with a world that increasingly demands *credentialed* proof of knowledge?

All of these questions arise, Pannekoek points out, in the context of a world that, some will argue, has never existed before- World 3 enabled and driven by Web 2.0 and all that it implies.

While the transformation of distance, open, and technology based learning continues in these new contexts, it is important to understand that challenges exist and how learning institutions that have adopted the principle of equity of access will meet them. These new learning models can meet the challenges posed by the new environment, but learning institutions may have to use them resolutely, vigorously, and collaboratively. Such an approach will likely require new partnerships among post-secondary institutions, regional national groupings, the corporate sector, and non-governmental organizations. No one can address global or technological issues alone.

[3] Frits Pannekoek, (President of the International Council for Open and Distance Education) personal communications, August 2008.

Statement of Purpose

The purpose of this paper is to examine the key global trends in higher education, adult and distance learning. An examination of these trends will facilitate the identification of some of the issues confronting higher education in general, and open and distance learning in particular. It will provide ICDE with a framework within which its strategic plan can be developed.

KEY TRENDS

Increasing Globalization and Internationalization of Higher Education

Globalization, defined as the flow of technology, economy, people, values, and idea across borders, is having a profound impact on most aspects of society and is a significant factor impacting the nature and function of higher education.[4]

In relation to higher education, globalization can be defined, on one hand, in terms of the economic, technological, political, and societal forces opening access to twenty-first century higher education, which has for much of the past century been *owned* by the upper and, to a lesser degree, the middle classes of the developed world. On the other, it can mean increasing the exposure of traditional learners to international experiences. One definition focuses on increasing the massification of learning throughout the world, the other on increasing understanding and connection. The two are not mutually exclusive, but whatever the perspective, it is now accepted that globalization has increased the rate of internationalization in higher education.[5]

In traditional post-secondary institutions, internationalization initiatives include creating a more international curriculum, fostering opportunities for students to study abroad, encouraging faculty and student exchanges, increasing international student recruitment efforts, and exporting or importing programs. Capacity issues are also sometimes factored into the discussion;

[4] Knight, "Internationalization Remodeled."
[5] Altbach and Knight, "The Internationalization of Higher Education."

internationalization does increase capacity at lower cost, particularly for graduate students, and it should create greater cultural awareness. Many nation states believe that it also fosters economic competitiveness.[6] A contrary view, held by many in developing countries, is that capacity building through the temporary export of brains ultimately results in the removal of the best and brightest from their own futures.[7]

Evidence of increasing internationalization is generally manifest in a significant increase in the cross-border activities of higher education institutions. Cross-border higher education is fueled in part by the growing worldwide demand for higher education and is characterized by increased mobility of students, courses and programs and increased mobility of institutions across national borders. As stated by UNESCO, cross-border higher education encompasses a wide range of modalities from face-to-face instruction (such as students travelling abroad and campuses abroad) to distance learning (through a range of technologies and including e-learning).[8]

Student mobility has increased significantly over the past two decades. Four million students studied abroad in 2004, a three-fold increase over the number in 1980. African students are proportionately the most mobile, with one in 16 studying abroad, and central Asian students are next in line. The trend toward studying abroad is likely to grow for both groups.[9] Australia is one of the primary destinations for international students in OECD members countries. In 2005, 17.3 per cent of all higher education students in Australia were international students.[10]

The question, of course, is the meaning of this new gold rush of internationalization. It might be argued by some that it is a manifestation of the changing demographics of the developed world's post-secondary environment. Without an influx of students, institutions may have difficulty coping with decreasing demand and costs exceeding the average cost of inflation. The soporific messages of internationalization overlie issues of survival.

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[6] Egron-Polak, "Internationalization of Higher Education Institutions."
[7] Chan and Dimmock, "The Internationalization of Universities."
[8] UNESCO, "Cross-Border Higher Education."
[9] UNESCO Institute for Statistics, *Global Educational Digest 2006*."
[10] Australian Department of Education, Employment and Workplace Relations, "The Development and State of the Art of Adult Learning and Education."

Within the open university movement, internationalization has manifested itself through direct distance delivery, partnership arrangements (e.g., two-plus-two agreements), franchising, the sale of curriculum, and the opening of branch campus operations. Other opportunities may emerge as private sector deliverers, national governments, and public institutions reflect on how fiscal and social mandates can be met in the new economic and technologically enabled environments.

Most post-secondary institutions believe that a cross-border or international experience is valuable to students in an increasingly globalized world. A survey on the internationalization of higher education, conducted by the International Association of Universities in 2005, drew responses from universities on most continents and from national university associations.[11] A majority of respondents identified internationalization as important to their institution. Institutional respondents ranked the increase in international knowledge and intercultural skills in university students, faculty and staff members as the greatest benefit of internationalization. They ranked commercialization and commodification of higher education, in a context of eroding national boundaries, as the key risk.

While internationalization initiatives are occurring in most countries, the large English-speaking developed countries are the biggest providers of international education services, a fact that is causing some alarm. Consumer countries, including middle-income Asian and Latin American countries and, to a lesser extent, poorer developing nations that lack the capacity to meet the growing demands for higher education, are increasingly concerned about their ability to control the internationalization agenda. The continuing pressures of globalization exacerbate this concern. While these countries might enjoy benefits such as increased choice, improved quality, and lowered costs, developing countries (in particular) face risks associated with opening the sector to international competition.

The possibility of foreign competitors overpowering poorly funded domestic higher education systems is real. All too often the international operations of foreign providers are regulated neither by the authorities in their home countries, nor those in the host country. Ultimately, students may be the victims of whatever problems arise, and universities are, of course, about

[11] International Association of Universities, *IAU 2005 Internationalization Survey*.

more than teaching; they are about research and service to their communities. Nation states must develop systems that allow them to contribute to world knowledge and to control their own knowledge futures.

Some believe that globalization has eroded the traditional role of governments in the educational sphere, that not only ownership but also issues such as quality, credibility and responsibility are being blurred:

> While in some countries the national frameworks for quality assurance, accreditation and recognition of qualifications take into account cross-border higher education, in many countries they are not prepared to address the challenges of cross-border provision. Furthermore, the lack of comprehensive frameworks for coordinating various initiatives at the international level, together with the diversity and unevenness of the quality assurance and accreditation systems at the national level, create gaps in the quality assurance of cross-border higher education, leaving some cross-border higher education provision outside any framework of quality assurance and accreditation. This makes students and other stakeholders more vulnerable to low-quality provision and disreputable providers of cross-border higher education.[12]

Increasingly however, national governments are beginning to regulate the activities of foreign institutions, particularly those of distance education providers. This carried achieved through accreditation processes, the creation of national lists, student loan restrictions, residency requirements, and copyright regulation. Such restrictions are expected to increase in the years to come. The private sector has already reacted by collaborating with or acquiring indigenous institutions, or by franchising courses. Internationalism is likely to remain a central long-term force in higher education, although the ways in which it manifests itself are likely to change.

ICT-enhanced higher education (open and distance learning, virtual universities, e-learning, open educational resources) is likely to become the most significant driver of cross-border provision. As this happens, challenges will arise as both institutions and governments attempt to control accreditation and, often with the best intentions, globalize their accreditation systems. Through the Bologna Accord, the European Union is the leader in this movement. To some, the

[12] UNESCO, *Guidelines for Quality Provision in Cross-border Higher Education*

unintended outcome is a new post-colonial knowledge environment in which the strongest of the developed national higher education institutions and their associations, however well intentioned, will increasingly be in a position to determine standards and accreditations. The impacts on the cultures and traditions of learning in developing countries, and among indigenous peoples have yet to be fully measured.

In addition to cross-border international initiatives by higher educational institutions, attempts to internationalize the curriculum have gained momentum. Some assert that the curriculum is the most important element in the provision of an international education, and argue persuasively that internationalized curricula are integral to any process of internationalization. According to many educators, the intent of internationalization should be the raising of global consciousness.[13] Internationalization of the curricula is multifaceted and purports to recognize values and nurture respect for differences among the cultures and communities of the world. Given the diversity of people, it becomes clear there is no single way to go about internationalizing courses.

Economic Drivers and Motivations for Internationalization of Higher Education

The movement or trade in goods and services, including educational services, across international borders is viewed as a key economic outcome of globalization.[14] Key decision makers consider higher education to be a tradable commodity as well as a social service. Economic considerations related to international competitiveness have become a significant driving force behind the internationalization of learning.

Along with the movement of goods and general services, the movement of educational services and products has increased significantly in the last decade. Education is increasingly seen not only as an export commodity but also as a key national opportunity for *branding* a nation's knowledge prowess. Knowledge institutions, whether private or public, are regarded as key stakeholders in a country's competitiveness. This view has gained particular prominence since the establishment of the General Agreement on Trade in Services (GATS), administered by the

[13] Khalideen, "Internationalizing the Curriculum in Canadian Universities."
[14] Knight, "Trade Talk."

World Trade Organization (WTO), the first ever set of multilateral, legally enforceable rules governing international trade in services, including educational services.[15]

As learning becomes increasingly borderless, higher education policy is likely to rank increasingly high on national agendas. Developing countries view increasing higher education participation as key to their transition to developed country status. The argument that higher education is a major driver of economic competitiveness in an increasingly knowledge-driven global economy is now widely accepted, although there are those who question whether it should receive the same priority as other development strategies. Many accept that higher-level employment skills are critical to sustaining a globally competitive research base and to improving knowledge dissemination to the benefit of all societies. However, some have argued that branded education (MIT, Harvard, Cambridge, Oxford, etc.), given people's varying abilities to access it, represents a marketing initiative by already dominant institutions and nations, directed to ensuring a market share of the world's best brains.

The real question becomes how to ensure mass access to higher education? Providing open, distance and technology enabled learning through national for-profit and not-for-profit providers is increasingly seen as the key to allowing mass access to higher educational opportunities. The challenges inherent in this prospect are real. Can mass education become synonymous with quality?

Worldwide Growth and Increasing Demand for Access to Higher Education

On December 10, 1948, the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights. The Assembly called upon all Member countries to make public the text of the Declaration and "to cause it to be disseminated, displayed, read and expounded principally in schools and other educational institutions, without distinction based on the political status of countries or territories." Article 26 of the Declaration proclaims that "everyone has the right to education" and that "higher education shall be equally accessible to all

[15] McBurnie and Ziguras, "Remaking the World in Our Own Image."

on the basis of merit."[16]

> The right to a primary and secondary education has long been accepted, but the belief that higher education is also a human right has also become widely accepted around the globe. This expectation springs from the cross-cultural and increasingly universal belief that education offers hope for employment, a better life for one's self and one's children, and fulfillment of one's personal aspirations. Thus, while population growth and demand for access are exceeding the capacity of institutions to deliver, we have at the same time raising expectations of people that access to education is their right. This disparity brings an added urgency to the efforts of governments and institutions to resolve in order to avoid further social unrest.[17]

Higher education has expanded remarkably in recent decades. Growth is, by all measures, faster than anticipated. Projections gave 120 million students worldwide by 2020, but that number has already been achieved.[18] In 2004, 132 million students were enrolled worldwide, up from 68 million in 1991.[19] Average annual growth from 1991 to 2004 was 5.1 per cent. Most of this growth has been in Africa, Asia, Latin America and the Caribbean, the Arab countries, and in Eastern and Central Europe. China and India have doubled their enrolments in the past 10 years alone. In many countries, youth and young adults have driven this increase but in others, such as Canada, New Zealand, and the United Kingdom, a significant number of older adults have also been entering the system.[20] In 2006 in Canada, for example, the majority of part-time students (approximately 190,000 of 275,000) were 25 years old or older.[21]

Although worldwide participation rates in higher education are increasing, participation rates in some regions of the world remain extremely low. The status of higher education in Africa is a cause for particular concern. Africa has an overall participation rate of less than 45 per cent, and participation drops to less than two per cent in sub-Saharan Africa.[22] Professor Barney Pityana,

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[16] UN, "Universal Declaration of Human Rights"
[17] Nicholas H. Allen, (Provost Emeritus and Collegiate Professor University of Maryland University College) in written correspondence with ICDE, December 5, 2008
[18] Daniel, Kanwar, and Uvalić-Trumbić, "A Tectonic Shift in Global Higher Education."
[19] Van der Wende, "Where do we go from here?"
[20] Santiago, Tremblay, Basri, and Arnal, *Tertiary Education for the Knowledge Society*.
[21] Association of Universities and Colleges of Canada, *Trends in Higher Education.*
[22] Pityana, "A Decade of Development and Education in Africa."

principal and vice-chancellor of the University of South Africa (UNISA), the oldest open university in the world, believes that open and distance learning may be the only viable and affordable means of providing post-secondary education in Africa, given the constraints there.[23]

Much of the recent worldwide growth in higher education has been at private universities while public institutions have been struggling with smaller budgets and inadequate staffing. This dominance of the private sector results partly from the fact that governments do not have the resources to provide post-secondary learning opportunities at the level needed to respond to the demand. The tensions among national agendas, offshore international providers and international trade structures, and between private sector and national institutions are likely to become intense in the decades to come. These tensions will increase as developing countries attempt to increase post-secondary participation rates, while maintaining quality and national control. In contrast, while capacity building will become a critical initiative in the coming decades for developing countries, increasing enrolment in the underfunded public and private institutions of the developed world will be equally critical.

Clearly, the projected growth of the worldwide population of people qualified to proceed from high school to higher education will yield a significant increase in demand that cannot be met by existing capacity or infrastructure. Given their combined population, for Asia, South America, and Africa to reach a level of post-secondary penetration equal to that of developed countries, they would have to build tens of thousands of traditional universities, each accommodating 40,000 students. While the inevitable growth of universities in the developing world will transform the map of higher education worldwide, new approaches are clearly needed. It is generally acknowledged that open and distance education is a good way of reaching out to large numbers of students. India accounts for a quarter of the developing world's population and has the third largest higher education system in the world. Approximately 24 per cent of all higher education students in India are enrolled in distance education institutions, specifically in the 13 national and state open universities and the 106 institutions, mostly public, which offer both on-campus and correspondence programs.[24] A 2007 study, under the auspices of the Commonwealth

[23] Ibid.
[24] Daniel, Kanwar, and Uvalić-Trumbić. "Mass Tertiary Education in the Developing World."

of Learning, of the development of the Indian state open universities concluded that

> ODL (open and distance learning) has vast potential in a country like India with millions of young aspirants eager to receive higher education and with conventional universities and colleges simply not being in a position to accommodate them. The infrastructure for the expansion of open universities is fairly good in the country, especially the mega OU, Indira Gandhi National Open University (IGNOU) willing to help the SOUs (State Open Universities).[25]

Growth and Impact of Open and Distance Universities

Open and distance learning is defined by the Commonwealth of Learning as a way of providing learning opportunities that is characterized by the separation of teacher and learner in time or place, or both time and place; learning that is certified in some way by an institution or agency; the use of a variety of media, including print and electronic; two-way communication that allows learners and tutors to interact; the possibility of occasional face-to-face meetings; and a specialized division of labour in the production and delivery of courses.[26]

The early development of distance education, after the mid-nineteenth century, was driven mainly by the private sector, which applied printing and postal service technologies to create correspondence education. The extremely successful University of South Africa is the oldest of the world's distance universities, and the University of London's pioneering work in distance learning has long been felt. In the United States and Canada, public educational authorities were leaders in distance public education.

Beginning 40 years ago, however, the second wave of multimedia distance education was driven primarily by the creation of public sector open universities. The emergence and evolution of open universities around the world can be characterized by a number of features[27] including the following:

- providing educational opportunities to a broader segment of the population, thereby

[25] Rajagopalan, "A Study of the Development of the State Open Universities in India," 18.
[26] The Commonwealth of Learning. "An Introduction to Open and Distance Learning."
[27] Peters, "Transformation through Open Universities."

encouraging the movement from elitist to mass higher education

- formalizing independent and lifelong learning opportunities for adults
- promoting the use of multimedia and new information and communication technology in distance and conventional higher education
- achieving cost effectiveness through large scale operations as seen in the mega universities
- promoting internationalization in higher education through cross-border delivery of courses and programs

After examining the mission statements of open universities in nine countries including Canada, China, India, Germany, the United Kingdom, and the Netherlands, Otto Peters[28] observed that the mission and goals differed in several ways from those of conventional universities. Open universities endeavour to

- produce more graduates at a lower per student cost
- provide for greater equality of educational opportunity
- provide access to adult students
- provide professional qualifications
- assist in the development and democratization of their respective countries

ODL has played a significant role in Asia, especially in providing access to higher education to people in remote areas and for up-grading teacher qualifications. The opportunity offered by the ODL system goes beyond conventional face-to-face education, reducing the obstacles posed by geographic and economic factors. In Indonesia, for example, Universitas Terbuka (UT) has given over one million people the opportunity to access higher education and has contributed significantly to the country's efforts to upgrade teachers qualifications.[29]

Barney Pityana has expressed the following view:

> Perhaps what we as ODL practitioners acknowledge, and what we quietly celebrate, is that the growth of ODL is testament to the demise of exclusivity in higher education

[28] Ibid.
[29] Tian.Belawati, (Asian Association of Open Universities) in correspondence with the author, September 2008.

> provision. The exclusionary triangle of access, cost, and quality has been broken by technology and its evolution, allowing broad access to quality education at an affordable price. In short, the growth of ODL has facilitated mass access to quality higher education. It is how we respond to the opportunity that this presents, that will determine its, and our own, future growth and success.[30]

Open universities are acknowledged as having had a significant impact upon innovation in higher education and as having paved the way for the next generation of distance education, which Peters characterizes as the "rise of *digitized distance education,* which began in the 1990s."[31] Peters credits open universities with enabling the emergence of virtual universities and corporate universities. Indeed, today, a number of corporations operate their own *universities* for their employees, although some, like Volkswagen's Autouniv, are designed for a more general non corporate elite.

Diversification of Distance and Higher Education Providers

The recent expansion of higher education has been accompanied by a diversification of distance education providers. The widespread development of e-learning, which usually means distance learning with some online components, is occurring in both the public and private sectors. The provision of blended learning opportunities has also increased, through learning models that combine traditional classroom practice with e-learning solutions. For example, students in a traditional class are assigned both print and online materials, have online mentoring sessions with their teacher through chat, and are subscribed to a class e-mail list. Additionally web-based courses can be supplemented by periodic face-to-face instruction. There is little doubt that, in the last several years, convergence has occurred between the *distance education format* and the *on-campus format.* While the traditional universities adopt technologies within their *way of working*, they also need to adopt the methodologies of the distance education teaching institutions. New types of institutions have emerged as well, and the number and types of educational offerings within existing institutions have increased and become more diverse.

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[30] Pityana, "A Decade of Development and Education in Africa."
[31] Peters, "Transformation through Open Universities, 297."

It is very likely that private-for-profit institutions will play a greater role in higher education. Since 1997, higher education in Australia has shifted from a primarily publicly funded system to one in which individuals and other private entities contribute to educational costs. Data published by the OECD show that, between 1995 and 2004, the public share of expenditures for Australia's tertiary educational institutions declined from 64.8 per cent to 47.2 per cent.[32] This decline in public expenditure for higher education mirrors a trend that is widespread in the developed world.

"Developing nations, by necessity, are likely to seek a much greater role for private, for-profit institutions than is the case in the developed world."[33] Capitalizing on supply and demand, for-profit institutions in the developed world will likely continue to expand their cross-border provision of educational services, especially through distance and e-learning. Indeed, private provision is already higher education's fastest growing segment worldwide.[34] It is predicted that private institutions will account for most of the higher education provision in some developing countries in a decade or two. "In East Asia, 80 per cent of students are enrolled in private tertiary education institutions in Japan, South Korea, Taiwan and the Philippines, where governments regulate the private higher education sector tightly."[35] Should we be concerned about the growth of privately funded, corporate higher education? What are the threats or risks inherent in this growth? Conversely, are there opportunities or benefits associated with the growth of these new providers?

The public sector has also been gaining strength, even though public institutions are under increasing pressure to operate in a cost recovery rather than cost responsive ways. The Indira Gandhi National Open University now has 1.5 million students, as do a number of Chinese radio and television universities.[36] Numbers are burgeoning at UNISA as well.

Conventional, face-to-face universities are increasingly moving into the delivery of online learning programs. Many conventional universities have been unable to adopt or adapt the

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[32] OECD. *Education at a Glance 2007*.
[33] Daniel, Kanwar, and Uvalić-Trumbić, "A Tectonic Shift in Global Higher Education."
[34] Daniel and Uvalić-Trumbić. "Going Global: In What Direction."
[35] Daniel, Kanwar, and Uvalić-Trumbić. "Mass Tertiary Education in the Developing World."
[36] Ibid.

strategies developed by distance teaching organizations fast enough to ensure increased access, quality, and sustainability through the use of teaching technology. Carol Twigg's research has provided evidence that completion rates improve when blended learning is used at low performing post-secondary institutions.[37]

Changing Learner Demographics, Experience, and Demands

Increased participation by women has been a significant trend affecting learner demographics in higher education. In addition, in most countries, higher education student bodies are increasingly heterogeneous in terms of socio-economic background, ethnicity, and previous education.[38] However, the expansion of higher education has not resulted in wider access for all groups of non-traditional students. Older people without traditional entry qualifications for higher education, people from working class backgrounds, those living in remote or rural areas, and those from ethnic minority or immigrant groups remain under-represented in higher education.[39]

Nevertheless, traditional learners are joined by increasing numbers of lifelong adult learners who need updating to remain current in their field, to increase opportunities for career advancement, or to guarantee employment. Most Western countries face the prospect of a shortage of workers, particularly skilled workers, due to pending retirements as continuing low reproduction rates result in fewer youth entering the labour market. How will the needs of these older students be accommodated? To what extent, if at all, are higher education institutions evaluating and recognizing prior learning, including informal learning?

Carl Holmberg noted that, in European countries, learning centres are scattered in both remote and populated areas and that they support the adult learners within a local context. These centres, he said, can work as brokers of programs and courses from a variety of providers. In a sense, they can support local growth and development.[40]

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[37] Twigg, "Using Asynchronous Learning in Redesign."
[38] Santiago, Tremblay, Basri, and Arnal, *Tertiary Education for the Knowledge Society*.
[39] Ibid.
[40] Carl Holmberg (Secretary General of the International Council for Open and Distance Education) personal communications, October 2008.

The UNESCO Institute for Lifelong Learning maintains its longstanding focus on adult learning as well as out-of-school and non-formal education in the perspective of lifelong learning. UNESCO has to date organized five international conferences on adult education (CONFINTEA I to V). The sixth International Conference on Adult Education, CONFINTEA VI, will be held in Brazil in May 2009. A number of national reports, each published under the title "The Development and State of the Art of Adult Learning and Education (ALE)" have been submitted as background material for the conference. That of the Brazilian Ministério da Educação notes that since CONFINTEA V, the proportion of adults in the population has increased and concludes that there is a growing need to broaden the opportunities for lifelong education and learning in Brazil.[41]

As learners become increasingly diverse, the demands for greater flexibility in the provision of higher education and greater relevance of content will likely grow. New generations of students have a greater concern about the link between their studies and the world of work.

Profiles of today's learners, the net generation, reveal learning preferences that we cannot ignore. Half the world's population (6.5 billion) is under 20. Two billion teenagers live in the developing world.[42] Providing the capacity to encourage learning will be a major challenge facing the nation of the future. The generation of learners now entering the higher education system in many parts of the world is significantly more technologically literate than previous generations. These technology savvy learners will likely demand a more aggressive e-based pedagogy that will include digital technologies, whether they access it from a village e-kiosk, a mobile device, or television or radio. (It should be noted, in passing, that while there has been a tendency to dismiss radio and television as yesterday's technology, the iPod and other new technologically driven formats have given old technologies new life.) In responding to this demand, however, institutions are likely to be constrained by a lack of the infrastructure and new pedagogies.

[41] Ministério da Educação. *National Report from Brazil*.
[42] Kanwar. Speech to the fifth Pan-Commonwealth Forum.

Increasing Focus on Accountability, Quality, and Performance

The expansion of post-secondary institutions has caused people to question the amount and direction of public expenditure for higher education. In addition to fiscal concerns, increased market pressures have also fostered the growing focus on accountability in higher education.[43] The development of formal quality assurance and accountability systems is one of the most significant trends to affect higher education systems during the past few decades. Starting in the early 1980s, quality became a key occupation of higher education policy.

The link between economic competiveness and higher education, and the increase in the number of cross-border providers in an increasingly globalized world has focused more attention on the quality issue. The *UNESCO Portal on Recognized Higher Education Institutions* provides access to on-line information on higher education institutions recognized or otherwise sanctioned by competent authorities in participating countries.[44] It provides students, employers and other interested parties with access to authoritative and up-to-date information on the status of higher education institutions and quality assurance in these countries. The country information on this portal is managed and updated by relevant authorities in participating countries. At the present time, information on the following countries is available: Argentina, Australia, Canada, China, Egypt, Jamaica, Japan, Kenya, Malaysia, Nigeria, Norway, the United Kingdom, and the United States of America. In the next stage of the project, the number of countries covered will be increased.

Open and distance learning has received more than its share of attention in terms of quality questions, particularly in recent years, given the proliferation of online providers. UNESCO makes the following statement:

> There are some distinct differences between distance education institutions and conventional schools, and they have policy implications. UNESCO's activities in this area aim to provide policy advice to governments and institutions on the establishment of quality assurance systems to support open and distance learning. . . . It is essential that

[43] Santiago, Tremblay, Basri, and Arnal, *Tertiary Education for the Knowledge Society*.
[44] UNESCO, *UNESCO Portal on Higher Education Institutions*.

> policies and guidelines speak to the relevant characteristics of the distance institution (i.e., mode of institution and learning technologies utilized) and learners.[45]

In the context of the growing globalization in distance education, there is an urgent need for international initiatives to review quality assurance mechanisms of distance education for higher education at the national and institutional level, to discuss new challenges facing a changing distance education environment, and to build quality assurance capacity to enhance quality standards in a globalized higher education market.

Tian Belawati notes that ODL has not yet established a universally standardized or acknowledged quality assurance system comparable to that of conventional face-to-face education. ODL practice should, of course, she said, be contextual, but some universal yet acceptable key performance indicators (KPIs) should be established by a widely accepted organization. That kind of organization does not exist in ODL.[46]

The European Foundation for Quality in eLearning (EFQUEL) appears to be well regarded by many. Among its objectives is "establishing a European Quality Mark initiative that, while respecting the different positions on the issue and the variety of e-learning applications responding to different aims and contextual needs, would bring some synthesis and clarification to help learners, buyers, suppliers, and regulators to share a common culture of quality."[47] The first EFQUEL Forum on Quality and Innovation of Learning took place on June 16-17, 2008, in Oeiras, Portugal.

Quality assurance frameworks for distance education in a globalized context are still in the early stages of development. Studies indicate the need for investigating a wide range of quality assurance practices in different contexts of distance education and discussing quality assurance matters in depth at the international level. UNESCO has observed that

> Over the past decade, several global working groups have been especially active in creating standards in a number of areas such as metadata, content, administrative

[45] UNESCO, "Quality Distance Higher Education."
[46] Tian Belawati (Asian Association of Open Universities) in correspondence with the author, September 2008.
[47] European Foundation for Quality in eLearning website.

> (enterprise) systems, learner information, and learning management systems. In the content development realm, several bodies around the world are collaborating to define, develop, categorize, and expand the use of standards and specifications for computer based learning materials. Compatibility is necessary, given how quickly old technologies are improved upon and replaced. It also becomes incredibly expensive to overhaul entire systems because of incompatibility issues with existing platforms, operating systems, and learning environments. It is essential in a rapidly changing environment that learning materials have the ability to be universally reused, recycled, and reorganized. Digital content has the added advantage of scalability and adaptability.[48]

The UNESCO/OECD *Guidelines on Quality Provision in Cross-border Higher Education*[49] may provide a valuable reference for developing national guidelines. These guidelines were issued as a secretariat document following the resolution of the 33rd Session of the UNESCO General Conference in October 2005. Based on United Nations and UNESCO principles and instruments, the guidelines aim to serve as an educational response to the growing commercialization of higher education. These guidelines are considered equally relevant for developed and developing countries. However, they do assume a degree of willingness to collaborate and an acceptance of openness that is at constant tension with the forces of commercial competition and globalization.

The UNESCO/OECD guidelines address six stakeholders in higher education (governments, higher education institutions/providers including academic staff, student bodies, quality assurance and accreditation bodies, academic recognition bodies, and professional bodies). They provide a set of orientations to practitioners and seek to promote mutual trust and international co-operation among providers and receivers of cross-border higher education. Considerable international work needs to be undertaken by all key stakeholders to ensure that the quality assurance mantra is not used by government, the private sector and the post-secondary sector to control the marketplace.

Although the work of UNESCO and other international bodies is important, most consider it at

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[48] Ibid.
[49] UNESCO, *Guidelines for Quality Provision in Cross-border Higher Education.*

least equally important that that individual countries and geographical regions take ownership of the quality assurance of their educational systems. For example, in February 2008, the African Council on Distance Education (ACDE) held a stakeholders' workshop on an African agency for accreditation and quality assurance in online and distance learning and a consultation on a Pan African Consortium of Open Universities. These initiatives have been met with great enthusiasm, and it is hoped that they will advance Africa's ODL project to even greater heights.[50]

Increasing Information Communication Technology (ICT) Access

Information and Communication Technologies (ICTs), which have long been used in distance education, are increasingly being used by higher education institutions worldwide. Before the advent of the Internet, open and distance universities were strong advocates for the use of radio and then television for learning. Today more sophisticated ICTs are emerging as a part of on-campus delivery and as modalities of open and distance higher education delivery.[51]

Internet access has expanded rapidly, more than quadrupling worldwide between 2000 and 2005, with the most rapid growth in the Middle East, North Africa, and East Asia. However, broadband is not widely available in most developing countries and does not exist at all in most rural areas, where over half of the population lives and a significant proportion of schools are located.[52] There, radio and television remain the more prevalent options.

Over the past 25 years, however, developing countries have considerably increased ICT access, especially for wireless telephone services:

> Mobile phones have an especially dramatic impact in developing countries—substituting for scarce fixed connections, increasing mobility, reducing transaction costs, broadening trade networks, and facilitating searches for employment. With prepaid services and calling cards, even poor households have been able to benefit from increased telephone

[50] Pityana, "A Decade of Development and Education in Africa."
[51] UNESCO, "Higher Education and ICTs."
[52] The World Bank, *2006 Information and Communications for Development.*

access.[53]

> From a small base, the number of mobile subscribers in developing countries grew more than five-fold between 2000 and 2005 to reach nearly 1.4 billion, with rapid growth in all regions. The fastest growth was in sub-Saharan Africa, to a total of nearly 77 million. Nigeria's subscriber base grew from 370,000 to 16.8 million during those five years, while the Philippines' grew six-fold to 40 million. Wireless subscribers in China (334 million), India (52 million), and Brazil (66 million) together now outnumber those in either the United States or the European Union.[54]

> If current trends continue, the typical mobile phone will have the processing power of today's desktop PC. It will almost certainly have a powerful digital camera, capable of both still and video imagery, and the capability to receive and play digital video and audio files.[55]

Cell phones are now getting cheaper in countries such as Indonesia, and many ODL institutions are starting to explore their use it for more substantial instructional purposes than the mere dissemination of short messages.[56]

Despite the rapid expansion of technology, however, in 2006, 90 per cent of Africans lacked access to a phone, and 98.5 per cent were without Internet access.

> In South Asia, the corresponding figures are 93 and 98 per cent; in the Middle East and North Africa, 79.5 and 95 per cent; in East Asia, 54 and 92.5 per cent; in Latin America, 49.3 and 89.5 per cent. Thus 10 per cent penetration is the high-water mark for Internet access, with two to five per cent more typical of Africa and South Asia. Phone access is better: roughly half the population in Latin America, nearly half in East Asia, and about a tenth of the population in Africa and South Asia has mobile phones.[57]

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[53] Ibid, 4.
[54] Atkins, Brown, and Hammond. *A Review of the Open Educational Resources (OER) Movement*, 71.
[55] Ibid, 75.
[56] Tian Belawati (Asian Association of Open Universities) in correspondence with the author, September 2008.
[57] Ibid, 72.

A study based on 2005 data shows that access to computers and the Internet in Brazil is quite limited.

> In 2005, only 18.5% of the population had a computer and 13.6% had Internet access at home; in 2001, these rates were 12.5% and 8.3% respectively. The proportion of the Brazilian population with access to the Internet is 17.2%, but the difference between socio-economic levels is striking: while access among the 10% of the richest Brazilians is 58.7%, among the poorest 40% it is only 5.7%. Unfortunately, the public policies that might be able to correct this situation are still not effective in terms of scope and focus. [58]

Despite the digital divide in Brazil, there are interesting projects that have attempted to address the issue:

> Acessa São Paulo is the principal project of "digital inclusion" sponsored by the Government of the State of São Paulo, and through which the government brings computer resources and the Internet to the low-income population by means of local InfoCenters, thereby reducing digital exclusion, and at the same time stimulating the human and social development of such communities. There are currently over 400 InfoCenters in the State of São Paulo (100 in the downtown and low-income suburban areas of the capital city, São Paulo, and 300 in other cities throughout the State, in collaboration with local municipal governments); 100 more will be opened by the end of 2006; and there are presently 1,000,000 registered users of the system.[59]

A statement from the Director General of UNESCO:

> On the one hand, the Internet and e-learning are enabling higher education to reach out, on a hitherto unprecedented scale, both to geographical areas and to sections of the population previously unreached. These technological developments have brought the vision of a global knowledge society appreciably closer to attainment. On the other hand, this vision will remain unattained as long as there is a gap between the technological *haves* and *have-nots*. This *digital divide* will continue to widen unless urgent steps are

[58] Ministério da Educação. *National Report from Brazil*.
[59] Litto, "Public Policy and Distance Learning in Brazil," 9.

taken to close it.[60]

Given the reality of the digital divide, we cannot abandon correspondence and radio/TV methods of delivery of higher education, which are still very important in a number of countries. Indeed, it can be argued that with pod casting and the increasing use of iPods, the old technologies, when repurposed, may become more relevant than before. There are also significant cost implications for the widespread use of new technologies. The cost of retooling may be beyond the capacity of even the wealthiest institutions and countries.

NEW DEVELOPMENTS IN TECHNOLOGY

Mobile Learning

"Mobile learning (m-learning) is the delivery of electronic learning materials with built-in learning strategies on portable computing devices to allow access from anywhere and at any time."[61] "M-learning is emerging to build on the advances of e-learning, or the use of Internet and learning management systems…."[62] The differences between m-learning and e-learning are as follows: e-learning is described as "learning supported by digital electronic tools and media," while m-learning is "e-learning using mobile devices and wireless transmission."[63]

Within the past five years, the University of Hagen in Germany has evolved its virtual university e-learning model "to the pocket university, where m-learning is being investigated for teaching and learning."[64]

> University of Hagen's typical students are employed, study part-time, prefer to attend virtual events asynchronously, and need access to information and materials while

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[60] Matsuura, Koïchiro. Forward to *Perspectives on Distance Education*, vii.
[61] Mohamed Ally, "Using Learning Theories to Design Instruction for Mobile Learning Devices," in *Mobile Learning 2004 International Conference Proceedings*, (Rome, July 2004), quoted in Hutchison, Tin, and Cao, "'In-Your-Pocket' and 'On-the-Fly,'" 202.
[62] T. Georgiev, E. Georgieva, and A. Smrikarov, 2004, "M-Learning: A New Stage of E-learning." paper presented at the International Conference on Computer Systems and Technologies, (Rousse, Bulgaria, June 28-31, 2004), quoted in Hutchison, Tin, and Cao, "'In-Your-Pocket' and 'On-the-Fly,'" 202.
[63] M. Milrad, "Mobile Learning: Challenges, Perspectives, and Reality," in *Mobile Learning: Essays on Philosophy, Psychology, and Education,* ed. N. Kyiri, (Vienna: Passagen Verlag, 2003), 151–164, quoted in Hutchison, Tin, and Cao, "'In-Your-Pocket' and 'On-the-Fly,'" 202.
[64] Hutchison, Tin, and Cao, "'In-Your-Pocket' and 'On-the-Fly,'" 205.

> travelling. For these students, efficient learning is key to educational success, and the flexibility to learn at a time and place which they choose is critical."[65]

In October 2006, Athabasca University in Alberta, Canada, hosted mLearn 2006, the fifth world conference on mobile learning. Topics of discussion included building and implementing m-learning strategies in educational institutions, corporations, and government; m-learning theory and pedagogy; cost effective management of m-learning processes, digital rights management, and m-learning management systems (mLMSs); emerging hardware and software for m-learning; and creating interactive and collaborative m-learning environments[66]
(see http://www.mlearn2006.org/).

While the use of this technology offers advantages, key disadvantages of using mobile devices include "the small display screen, reduced storage capacity, and reliance on a battery-powered device."[67] Nevertheless, a number of researchers believe that the use of mobile devices can increase equality of educational opportunity worldwide by removing barriers to anywhere, any time learning.

PERSONALIZATION IN ONLINE LEARNING

Personalization includes using learner-specific adaptations and strategies that may take many forms including sequencing or presentation of content, learner feedback and evaluation. In online learning environments, developers of new technologies are attempting to ensure that teacher led strategies in traditional face-to-face environments can be applied and, increasingly, self-managed by online learners.

EDUCATIONAL SOCIAL SOFTWARE (ESS) IN DISTANCE AND ONLINE EDUCATION

Terry Anderson describes the challenges associated with developing modes of distance education that facilitate flexibility for learners, including "the ability to enrol continuously and to pace

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[65] Ibid.
[66] Ibid.
[67] Ibid.

one's own learning, and yet still create opportunities and advantages to working co-operatively in learning communities with other students.[68] Anderson describes a relatively new genre of learning tools which help address these seemingly conflicting priorities. ESS refers to "networked tools that support and encourage individuals to learn together while retaining individual control over their time, space, presence, activity, identity, and relationship."[69] While educational tools such as computer conferencing and e-mail qualify as social software under this definition, other more sophisticated forms of ESS are being developed.[70]

ESS is gaining popularity for its potential to support opportunities for community building in cost effective ways. "Generally, the ESS tools developed to date offer combinations of blogging, portfolio management, discussion and file sharing, group file management, and search and linking capacity.[71]

It has been noted that some distance education programs attempt to meet the social "challenges of isolation and self-direction by developing models of learning based upon cohort groups of students, interacting either through real-time audio, video, or immersive conferencing or asynchronously through text conferencing with a teacher and other students."[72] It is further noted that this model has not been demonstrated to be cost-effective when compared to self-paced distance learning.[73]

Social networking sites such as Facebook and MySpace allow students in classes (face-to-face or online) and informal learners to create online communities. Although the sites are public, individuals or groups can choose to close off their space, limiting it to friends or classmates. The technological and capacity issues facing developing countries make this a tantalizing but still expensive option. Many of the new technologies have been developed by the wealthier institutions, and it is only now that some of them are being adapted for use in the southern hemisphere.

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[68] Anderson, "Social Software to Support Distance Learners," 221.
[69] Ibid, 227.
[70] Ibid.
[71] Anderson, "Distance Learning: Social Software's Killer Ap?" 8.
[72] Anderson, "Social Software to Support Distance Learners," 222.
[73] Ibid.

Changes in Cost, Affordability, and Economic Models for Open and Distance Education

A number of trends are apparent in funding arrangements for higher education in general. Funding sources have been diversified beyond those provided by national or state governments. In addition, the allocation of public funding for higher education is increasingly characterized by greater targeting of resources, performance-based funding and competitive procedures. Often, funding mechanisms are designed with conventional institutions in mind, placing distance and open education institutions at a disadvantage.

According to Rumble and Litto,

> The use of technology has changed the cost structure and funding requirements of higher education (whether it be public, private-for-profit, or private-not-for-profit), making it necessary to carefully distinguish and prioritize committed costs, flexible costs, and business-sustaining costs. Traditional approaches to higher education are highly labour-intensive; distance education is capital-intensive but possibly permitting low flexible costs; and e-learning offers complex patterns. The planning of programs for lifelong learning and distance education must take into account short- and long-range variables such as principal objectives or mission (profit motive? digital inclusion?), technological and media alternatives, financial sustainability, and who will have to pay which part or parts of the costs?[74]

The UNESCO Global Forum (2007) reported that the various forms of distance learning have already dramatically reduced the cost and increased the availability of quality higher education and asked whether the new technologies allow us to envisage another quantum leap to wider access and lower costs. Two technological developments, the Internet and Open Educational Resources (OERs), could allow new providers to reach a much lower price point and open up higher education to the billions in the developing world.

With regard to the Internet, the significant increase in connectivity around the globe offers

[74] Rumble and Litto. "Approaches to Funding," 33.

promise. "The Internet and mobile telephony have tremendous potential for improving the student experience, both as a channel for distributing learning materials and as a vehicle for useful interaction."[75]

Open Educational Resources, a term coined by UNESCO in 2002, refers to the "open provision of educational resources enabled by information and communication technologies, for consultation, use, and adaptation by a community of users for non-commercial purposes."[76] OERs create opportunities for collaboration and cost saving. They include open content, as well as software tools and standards: full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

> Making excellent materials freely available for sharing and onward adaptation, could slash the major cost of distance learning, which is the development of quality learning materials. This could be the key breakthrough for taking higher education to the bottom of the pyramid in the large states and reducing both foreign exchange costs and dependency for the small states.[77]

UNESCO has created a Free and Open Source Software Portal giving access to documents and websites relevant to the Free Software/Open Source Technology movement. It is also a gateway to resources related to free software. A community of over 500 members from 90 countries is discussing the important issues related to the promotion, development, and use of OER. Access to the portal is available at http://www.unesco-ci.org/cgi-bin/portals/foss/page.cgi?d=1.

UNESCO and the International Council of Distance Education (ICDE) have a task force working to develop an international approach to OER. The ICDE, like the European Commission's Open eLearning Content Observatory, is helping to produce a roadmap to many of the key issues.

In May 2007, the OECD published a report entitled *Giving Knowledge for Free: The Emergence*

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[75] UNESCO Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications in Higher Education. "Learners and New Higher Education Spaces," 4.
[76] OECD, *Giving Knowledge for Free*, 30.
[77] Daniel and Uvalić-Trumbić, "Going Global: In What Direction?"

of Open Educational Resources. The report provides an overview of the rapidly changing OER phenomenon and the challenges it poses for higher education. It examines reasons for individuals and institutions to share resources freely and looks at copyright and sustainability issues, business models, and policy implications.[78] The report is available online.

Between 2002 and 2007, the Hewlett Foundation, a major sponsor of the OER movement, invested about $68 million in its own OER initiative, which aspires to provide open access (and eventually open contribution) to high-quality educational resources on a global scale and in many languages. The portfolio has supported a mix of provisioning high-quality OER, particularly in the United States, and its use worldwide, especially in developing countries.[79] Hewlett "will support pilot projects that will enable a world of users to adapt and modify content to meet their own language, cultural, and pedagogical needs."[80]

The flagship of OER investments is the MIT OpenCourseWare Project. This world-changing project emerged from MIT faculty and administrators who asked themselves the following question: "How is the Internet going to be used in education, and what is our university going to do about it?" The answer from the MIT faculty was this: "Use it to provide free access to the primary materials for virtually all our courses. We are going to make our educational material available to students, faculty, and other learners, anywhere in the world, at any time, for free."[81] Atkins, Brown, and Hammond note that "The MIT OpenCourseWare Project is noteworthy in its scale, completeness, quality, and positive influence on others. It is, however, basically a digital publishing model of high-quality, pre-credentialed, static material."[82]

A number of universities are engaged in substantive OER initiatives. The Open Learn Project of the Open University in the United Kingdom is offering existing courses or parts of courses freely online. The OU's Open Content Initiative provides collaborative tools that allow learners to find each other and offers a repository that will receive back content that has been modified by a user. A new initiative called "Best First Year on Line", the result of a partnership between Canadian

[78] OECD, *Giving Knowledge for Free.*
[79] Atkins, Brown, and Hammond, *A Review of the Open Educational Resources (OER) Movement.*
[80] The William and Flora Hewlett Foundation, "Open Educational Resources."
[81] Atkins, Brown, and Hammond, *A Review of the Open Educational Resources (OER) Movement, 8-9.*
[82] Ibid, 10.

Virtual University and Athabasca University, is seeking to develop pedagogically rich content for 12 foundation courses that could be adopted by any student, college or university anywhere in the world. In contrast to simply dumping content online, these initiatives are encouraging steps toward enhancing the quality of open courseware.

Rumble and Litto report that one of the most high-reaching projects underway in Latin America is TIDIA-Tecnologia da Informação no Desenvolvimento da Internet Avançada (Information Technology for the Development of the Advanced Internet), a three-year multi-institutional effort, budgeted to cost three million U.S. dollars and sponsored by FAPESP, the State of São Paulo's Research-Support Agency:

> Sixteen research laboratories in public and private universities in the state are at work on the collaborative development of a *suite* of interoperable applications for distance learning on the web, which will be open-source in nature and will be made available without charge to all interested parties. It will include the software programs necessary for online courses…, for non-courses but nevertheless educational environments (such as *digital caves* and other forms of virtual reality), for the construction of digital libraries, museums and repositories of learning objects (all of which must have interfaces with the course platforms), and for the preparation of dictionaries, encyclopedias, concordances, time-lines and other reference tools which are part of the infrastructure for distance learning.[83]

Despite the enthusiasm of proponents of the OER movement the likely effects of OERs on the higher education system are not yet entirely clear. For example, availability of OERs might persuade some governments and institutions to under-invest in faculty. The emphasis on the Internet might well affect more traditional learning styles. A considerable amount of work also remains to be done on the effects of technology and the new open source movements in developing countries and on various cultures. Should we not discourage what some consider to be a knowledge hegemony created by transplanting educational resources from the developed world into developing countries?

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[83] Rumble and Litto. "Approaches to Funding," 43.

CONCLUDING STATEMENT

How will the global trends identified in this paper affect the ICDE and its member institutions and how should they deal with these issues over the next four years? The ICDE is truly the only worldwide organization for distance education and, as such, should be a platform for the exchange of ideas—not to think for others but to provide a space for discussion and debate.

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