

ICT Applications in Latin America: From Information to Knowledge-Building

by Angela Castellanos

With the electronic revolution and onset of the age of information, not only the global economy but also cultural and social values have changed. During the last two decades, the development of new technologies by the rich countries of the North, and the global South's subsequent adoption of these support the argument that the technological revolution is taking place simultaneously in the North and South. A new piece of software, for example, can be launched simultaneously in Japan, Argentina and France. But, the number of users who can purchase it is not the same between the "digital divide."

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The discrepancy is such that in 1999, of the 153.2 million worldwide with access to the Internet, a mere 1.1 million were Africans (less than 1 percent), 26.5 million were Asians (17.3 percent), and 4.50 million were South Americans (2.9 percent), in contrast to 33.4 million Europeans and 87 million North Americans, who make up a 78.5 percent global total with access to the Internet.¹

A closer examination of these figures reveals further disproportions within Latin America itself. According to a study carried out between 1996 and 1998, Venezuela had 783 servers while Peru had only one.² There is also differential access by gender. Women accounted for only 38 percent of the total number of Internet users, even though they rep-

resent 51 percent of the population in the region.³

The debate over this digital divide has focused on the political and financial mechanisms required to increase access to new information and communication technologies (ICTs) in the South. But there is another element to this divide: the unequal use of ICTs to create knowledge and address social needs.

Information and Knowledge

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found online into knowledge and to gain a command of ICTs so that new applications attuned to the social needs of the region are developed. Despite the efforts of the commercial, financial and academic communities, however, the region is a long way from achieving this.

The region's private sector has begun using the Internet to improve its marketing strategies through e-commerce and to provide electronic access to financial services. In the academic world, countries like Brazil, Chile and Colombia have set up national training programmes to develop computer skills of young students. Many universities offer online education programmes. One of the most outstanding initiatives is that of the University of Monterrey in Mexico, where courses to seven countries of the region are conducted via satellite and the Internet. Brazil and Colombia have developed ICT applications for informal education, which have earned them the "The Stockholm Challenge Award."⁴

The progress in the adoption of ICTs in such areas as government transparency, health care services and raising the value of the local, national and regional knowledge has been noticeably slow.

In most of Latin America, government agencies often use ICT as a dissemination tool, without consideration of its communicative and interactive potentials. Mexican and Co-

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lombian government Websites offer space for debates, and those in Brazil and Venezuela provide some services online, but the region is far from implementing what it is known as electronic governance, which could help fight corruption. Besides, government agencies are only beginning to use Intranets.

Internet access, however, has come to be recognised as a matter of national interest, and governments have in place telecommunications programmes to expand the coverage of Internet in their countries. Unfortunately, there are still some making regressive decisions. Since last January, Cuba has forbidden the sale of personal computers to individuals as a means to control the people's access to Internet content coming from its detractors.

Access and Networks

The requirements of building a knowledge society extend beyond a modern infrastructure and higher incomes to make Internet services affordable to everyone. In a recent survey carried out in Colombia, Internet users mentioned the difficulty in finding information on the Web.⁵

Some Websites provide information on the information available online, called meta-information. Such Websites are one of the best means of facilitating the access to specialised information. One good Latin American meta-information Website is the *Portal de la Sociedad Civil de Chile* (Chilean Civil Society Clearinghouse), which provides up-to-date information on social organisations and NGOs. It also posts documents, data on social issues, and news on citizens' initiatives. There is an urgent need in Latin America for more of these types of sites to help strengthen the region's capacity to use ICTs.

The creation of e-networks and the empowerment of people and organisations in ICTs are also essential if the region's people are to take advantage of the tremendous resource that information has become. In fact, networks are the main tools of a knowledge society. ICTs could strengthen pan-American links, and in this direction, the Summit of the Americas has created the Connectivity Institute for the Americas.

Knowledge comes from the exchange of information. Although the number of listservs with meta-information is on the rise, only a minority of Latin American Internet users are part of electronic groups, online forums or virtual networks. This is partly because of the question of access, partly because most of these are in English (and operated from the north), and also because of a common misconception that sharing information leads to a loss of power. But the exact opposite holds true now.

Some nations recognise the advantage of electronic networks in terms of citizenship, social cohesion and bureaucratic management. In 1993, the government of Recife, Brazil set up the first network for free Internet access called Citizenship Network and Information for the Citizens. At a regional level, virtual networks are in their incipency.

Knowledge Building

The use of ICTs has demonstrated that these are effective not only in disseminating information but also in promoting partnership, transferring knowledge, and encouraging community participation in development projects and decision making. The annual Human Development Report released by the United Nations Development Programme now includes technological advancement and Internet access as one of its yardsticks in measuring social and human progress.

Latin America must encourage the implementation of ICTs to bring the region to the age of information. Developing countries in Asia and Africa are using ICTs in innovative ways to address environmental problems, promote indigenous culture, establish businesses for women, and disseminate new farming methods. In doing so, they illustrate that the lack of infrastructure is not an insurmountable obstacle as long as there is the will to use ICTs to meet social needs.

True, Latin America faces many obstacles before it can become an information society. It suffers from a lack of financing, limited telecommunication coverage in the rural areas, high telecommunications tariffs, the influence of anti-democratic groups, and armed conflicts, all posing competing claims on a limited national budget. These are obstacles linked with the structural problems of the region and requiring massive effort from governments as well as civil society. But the region cannot afford to be left behind by the revolution in ICTs either. ♪

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Footnotes

¹ A recent NUA internet survey, cited by Hans D'Orville, Information Technologies for Development Programme Director of the UNDP, during the international conference "Connecting Knowledge in Communications," Montreal, 1999.

² Research carried out by the National Network of Research of Costa Rica and the Network Unit of Costa Rica University.

³ Research carried out by Nancy Hafkin and Nancy Taggart for United States Agency for International Development, June 2001.

⁴ The Stockholm Challenge recognises the benefits and positive changes that information technology can bring to communities, rather than on the sophistication of the technology itself. It offers IT pioneers around the world a unique opportunity to showcase projects of excellence—private, public, academic or non-profit—in the categories of New Economy, Education, Health, Democracy, Culture, Environment and Equal Access.

⁵ Survey carried out by the magazine *Soho*, year 2000.