THE EXPERT’S OPINION

Why We Care

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Presented at ICIS’97 in a Panel on “What is different with information technology implementation in less developed countries and why should we care?”

Mr. Chairman, fellow panel speakers, guests,

My colleagues have spoken about some of the issues and impacts of IT in developing countries, particularly the aspects of opening up new markets for technology products and services, for selling Internet connectivity, equipment and the like. Now, I would like to add another dimension - the social and economic dimension - to why we should care:

Picture a village school in Uganda, where the children and the teachers have nothing more than the prescribed textbooks. The school library has no encyclopedias, and there is not one computer in the school. Picture a school in Jackson Hole, Wyoming where the library is overflowing with books, and the school’s computer room has several computers.

Under a school-to-school initiative titled “WorLD Links,” computers are sent to the school in Uganda. Internet connectivity is provided and the school-to-school link is established between Jackson, Wyoming and three secondary schools in Uganda. Now on a daily basis, the kids in Wyoming and Uganda communicate and exchange information on a wide variety of topics. The teachers in both countries collaborate on projects. Knowledge flows freely transcending boundaries and overcoming handicaps. Teachers who formerly taught from memory and out-of-date books now have access to virtual libraries, museums, and other teachers, and can bring these resources into the classroom.

Based on the success of this first venture, WorLD Links projects have been initiated in Ghana and Senegal, with partner schools in Chicago, Toronto and Quebec.

Connectivity Issues in Developing Countries

This all sounds very logical. The basic elements required to put information and knowledge to work are skilled people, and the information and communications infrastructure. But, there are some real issues to overcome:

1. Opportunities and Threats
The rapidly increasing stock of knowledge, its greater availability and its broader dissemination using the Internet pose both opportunities and threats for developing countries:

- opportunities, that will enable effective use of the growing stock of knowledge to improve their wealth and welfare; and
- threats, to the extent that they do not harness this source of wealth - or are unable to access it - they will fall behind still further.

Similarly, the inequalities within developing countries may increase, thereby increasing the gap between the rich and the poor - i.e., those with access and necessary literacy skills versus those without access and/or without the literacy skills to utilize the knowledge.

2. Infrastructure is uneven
Telecommunications is no longer a luxury but a prerequisite for economic growth and development. But, connectivity is uneven, even nonexistent in many LDCs. Less than 1% of the world’s Internet traffic reaches Africa; and most of that 1% goes to Southern Africa. Contrast these figures as examples:

- In Sub-Saharan Africa, there are less than 0.5 phone lines per 100 people. There are about 0.1 Internet hosts per 100,000 inhabitants.
- Industrialized countries have 52.6 phone lines per 100 people, and 1,014 Internet hosts per 100,000 inhabitants.

The lack of a telecommunications infrastructure means that many people will not have access to telephones or other means of communications within their own countries, let alone to connect to other countries. Many people will not have access to the explosion of information and knowledge pouring over the Internet.

Let’s look at this picture from the perspective of someone in, say, Uganda or Malawi. Most people do not even have a telephone at home, let alone a computer. Electrical brownouts or complete failures frequently interrupt what access there is. How can they participate in this information explosion?

Because of the lack of connectivity, there is a distinct possibility of a one-way flow of information and academic materials from North to South. But, it is important to ensure two-way flows, so all countries can access information about...
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