Educational and Cultural Implications of the Information Revolution

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A whole range of implications for both the developing and the industrialized world – economic, social, cultural and educational – flow from the Information Revolution created by advances in microelectronics and communications technology. It is vitally important that the Third World learns how to make creative use of these new advances and participate in their development in order for it to be a full partner in the benefits of the Information Revolution, and not a victim of it.

In the North, this revolution is impacting on industrial processes and productivities with growing use of robots and other tools of automation. The South's assumption that marginal industries would move to their part of the world from the North in search of cheap labour and to be closer to the sites of resources is no longer a valid one. First World industries are increasingly finding that they can do the job more effectively with new technologies coming on line almost daily. With the North's productivity growing faster than the South's at an even greater rate than in the past, the already enormous gap between the two parts of the globe is bound to grow ever wider unless the South finds ways to make the new technologies work to their benefit in innovative fashion.

Another contributor to the widening North-South gap is the different nature of the increasingly central problem of unemployment in the North and the South.

For the North, it is due in large part to the advances in automation, robotization and communications – the unemployment is mainly structural and sectoral in nature. For the South, the challenge is one of trying to cope with massive and increasing youth unemployment. As of the late 1970s, for example, nearly 50 per cent of the unemployed in Hong Kong, India and the Republic of Korea, 55 per cent in the Philippines, and 74 per cent in Thailand were under 24 years of age. The International Labour Organization has estimated that as many as one billion new jobs need to be created in the Third World by the year 2000.

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To cope with such staggering figures, while at the same time reducing the gap, the developing countries, particularly the late-comers in industrialization, will have radically to rethink their pattern of industrialization along lines that will enable them to compete in different areas and on different terms with a computerized and robotized North and at the same time take care of their own massive unemployment problems.

Generally, therefore, we are witnessing a widening of the gap between those with ready access to information and those lacking in such access. The North-South gap has become the information gap, demonstrating conclusively that information means power. If left to its present dynamics, the Information Revolution will only strengthen disparities, but that need not be the case. I personally believe that it should be possible for the South to use the Information Revolution creatively as a vehicle to reduce and not widen the present gap. This is one of the basic challenges now confronting the Third World.

Very much the same kind of gap exists within the Third World itself - with information a key element in furthering the alienation between upper-class urban elites and the masses of the rural and urban poor. Compounding this is the devastating impact of the economic recession, especially on the poor in the Third World, which is pushing the social and political systems in many developing countries to the limits of their resilience.

In addition, due to transborder information flows that governments will be increasingly powerless to control, the elites are likely to become ever more attached to products of Western mass culture and advertising, with resultant change to consumer habits unrelated to domestic production capacities. This leads to new patterns of dependency.

With their video cassette recorders and other accoutrements of the modern communications age, the elites become absorbed with affluent Western life-styles rather than in the evolution of new forms of indigenous cultural manifestation more consonant with the changing needs of the bulk of the people in their own society. What is now needed are socially and politically innovative ways to turn this process around that widens the internal gap under the impact of the Information Revolution, and enhance social and national solidarities. With the hundreds of millions of rural poor flooding into the cities, for example, with much resultant culture shock, there could be fresh and imaginative use of local television, radio and other forms of communication to help the adjustment and integration of new urbanites.

The growing Westernization and alienation of the elites, I believe, could well be a factor in the increase in incidence of urban criminality. Drawn to the cities by the lure of jobs, only to find no work, but with communications heightening consumer expectations, the rural poor then begin to see the real difference in life-styles and opportunities between the rich and the poor. Out of this is bred despair, rage and violence which, when it challenges the life-styles of the comfortable and the affluent, can lead to even more violent reaction.

It is in this context that one needs to look anew at the development process - which is essentially a learning process. Development succeeds when a society as a whole and at all levels learns to make optimal use of its resources through the application of science and technology towards improving the daily lives of its citizens in ways that are consonant with their basic values and aspirations.

We must devise the means by which information about scientific and technological developments reach those who could use it most - such as the small farmers and small entrepreneurs. So far, only the elites have had access to this information.

But those who need information will be reached only if there is the appropriate information infrastructure - one that allows for communication between centre and periphery. The learning capacity of the so-called periphery is dependent on it developing its own capacity to generate, ingest and absorb information rather than on the power behind the process of one-directional transmission.

But for this to happen, micro-information environments must be built up at the village level. There must be greater participation in and access to the whole information process, and more equitable distribution of communication facilities and information resources within societies. For this reason, farmers and small entrepreneurs in Third World countries need to have their own radio stations to keep each other informed about crops, weather conditions, markets in nearby villages or towns, and other data of immediate pertinence to them. This will take political courage on the part of governments, but unless they take these steps to create micro-information environments, development efforts are bound to remain ineffective. Strategies devised by the centre can take the development process only so far - farmers and others in the periphery, who have hitherto had little say, need to be active and informed participants in order to maintain the momentum of development.

Inherent in creating such new micro-information environments could well be a shift away from a traditional Western paradigm of linear communication from sender to receiver to modes of communication that are multi-modal and interactive, potentially more participatory and also, perhaps, more congenial with non-Western forms of communicating. This is an area under study by the United Nations University.

Yet another impact of the Information Revolution is on power and the distribution of power. If allowed to run the course they are now on, the new instruments of communications and information seem bound to lead to much greater centralization of power and loss of freedom and privacy. However, this revolution also contains the seeds of greater opportunities for sharing of power and wider participation by the people, particularly the impoverished hundreds of millions in the Third World. But for this to happen the developing countries will have to find ways to develop and use these technologies in a manner that unlocks local initiative and creativity. They need to turn the Information Revolution around to make it serve their own

needs and especially the needs of the poor and the weak in their societies. Apart from political will, this will also require new surges of social and political innovation. Only when the Third World does this will we have a chance of playing an active part in the Information Revolution - to be part of the solution, and not part of the problem.

With the world's population due to swell to some six billion people by the year 2000, we are, therefore, forced to think about education and learning in new ways. There will simply be too many people to educate them formally in schools as in the past. The knowledge explosion we are witnessing further means that the transfer of knowledge in the traditional manner, from teacher to pupil, is increasingly inadequate.

It is recognized more and more that conventional systems of learning can no longer absorb the range of knowledge generated and disseminate it in the usual educational time-span before that knowledge has become obsolete, or respond adequately to the demands of equitable and widespread access to knowledge in order to meet the requirements of rapid social change and the enormous complexity of the modern world's problems. New modes of education, learning and sharing of knowledge are therefore needed, at all levels of society, using all available services and techniques. This is another area of interest to the United Nations University.

We are talking here about the question of learning how to learn and how to be creative - not only in technical terms, but in political and social terms as well. One important challenge here is posed by increasing life spans, where we will have to find ways to allow the elderly to make socially and culturally productive use of their additional years, both individually and collectively.

Essentially at question is our capacity for social creativity - for power-sharing, for solidarity-building, and new forms of civility in a crowded, competitive world. The Information Revolution can create problems of growing disparities, fragmentation, atomization of social cohesion, and impoverishment of human relations - through more and more impersonal reactions with the computer console and the television screen.

But at the same time, it offers the Third World great hope and promise, for if we act with imagination and creativity, ours can be the choice of developing new alternative societal responses that will enable us to make the Information Revolution serve our own interests, values and aspirations in an increasingly interdependent world.

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