

Knowledge societies for human development

By Vikas Nath

KNOWLEDGE is empowering. Lack of knowledge is debilitating. Knowledge empowers an individual to form his or her own opinion, to act and to transform conditions to lead a better life. Approaching development from knowledge perspective can vastly improve the quality of people's lives. Knowledge about nutritional values of food-grains can mean better health, even to those with little to spend on food. And knowledge about benefits of micro-credit programme can make it possible for poor people to invest in a better future for themselves and their children. In a broad sense, access to right information at the right time gives people greater control over their destinies. The World Bank forum called *Voices of Poor* which got feedback from 60,000 people in 60 countries concluded that people wanted access to knowledge and opportunities instead of charity to fight conditions leading to poverty. And knowledge is not a scarce resource — it is infinitely expandable and proliferates with its use.

Knowledge sharing can occur at all levels — between countries, within a country, between communities and among individuals. At the village level, where land is the main resource, knowledge about legal ownership is often confined to a handful encouraging thereby its use in an exploitative manner. If the same information is put into the public domain then its potential to be used in an exploitative manner diminishes as the same information transforms itself into a social good. With the transfer of information from private domain to public domain, the societal forces re-arrange themselves that lays the basis for equitable sharing of power and responsibilities.

Evolution of ICT-enabled knowledge societies

Knowledge sharing is not a new concept. From time immemorial, knowledge has been passed on from one generation to the other through written texts, folklore, religions and customs. The knowledge however remained preserved geographically and hierarchically. On the other hand, information and communication technology (ICT) breaks all the natural, social, cultural and hierarchical barriers to knowledge sharing in an unprecedented manner.

The ICT network is based on the principal of inclusion and participation rather than on the principle of exclusion. A small shop-owner in Africa has as much right to information over the Net as a big conglomerate in Europe. There is a free flow of information through different channels as information once hosted on the Net can rarely be fully obliterated. Information about new vaccines and health cures developed in any part of the world can be transmitted across continents in an instant. Emails, mailing groups, newsgroups, discussion groups and interactive websites hold immense potential to reach everyone who is connected to the Internet to target specific information or get views of the people. The technology allows individuals to bring together knowledge by harvesting data from other sites and adding value to it by prioritising, translating and updating. Knowledge, therefore, no longer remains confined but perpetuates and there is a continuous value-addition and customisation.

Such unrestricted and continuous sharing of global and local knowledge between policy-makers, public and private sectors, and the civil society heralds the way forward to an empowered knowledge society which can efficiently manage the change process towards sustainable human development. Evolution of knowledge societies bridges the gap between the communities and between development professionals and rural people through initiating interaction and dialogue, new alliances, inter-personal networks, and cross-sectoral links between organisations so that "useful knowledge" is shared and channelled to provide decision-making support. Alternative mechanisms to carry out these tasks would take a lot more time, resources and efforts.

There is no choice, as the growth of knowledge societies is becoming pivotal for the creation of resilient economies and for providing higher quality of life. The pertinent question is not whether, but how soon, will the developing countries be able to remove all the barriers to knowledge sharing to transform themselves into knowledge societies for sustainable human development.

Strengths of ICT

Transformation potential of ICT-enabled knowledge societies is not confined to the developed countries. The potential is immense for developing countries but depends on what the perspective is. We may view the digital divide as one half of the world not having access to the phone or as millions of small businesses and entrepreneurs in such places which could immediately benefit from access to email and internet. Countries with access to ICT innovations and having a capacity to absorb them and use them will have the capacity to reap socio-economic advantages, and focus on human development.

By focusing on improved information and communication technologies, developing countries can broaden the scope of their actions and address human development related issues previously beyond their capacity. Wider penetration of knowledge societies, based on information and communication technologies, can involve more people hitherto unreached or under-served and accomplish a deeper geographic penetration, especially to rural areas, than in the case with traditional means and modalities. It allows access to usable and intelligent information worldwide; promotes forms of knowledge networking which transcends borders, languages and cultures; fosters empowerment of communities; and helps spread knowledge about "best practices" and experiences. The evolution of such ICT-enabled knowledge societies is instrumental to helping communities break from the narrow national and local outlooks and from the hegemony of governments and the large corporations. Some other ways by which the evolution of knowledge societies promote the cause of sustainable human development are given below:

Access and control
There is no worse form of human rights violation than to be deprived of the ability to think, create and communicate in freedom. In this era of information revolution, people are having relatively easier access to vast storehouses of information but it is tragic that the delivery mechanisms for knowledge are today in the hands of fewer and fewer people. ICT-enabled knowledge societies make it possible to amalgamate local knowledge with information held in remote databases and information repositories to bring about a greater understanding of the conditions leading to poverty and the factors propagating it. Further, it often puts the control of what is to be transmitted and the delivery mechanism through which it is to be transmitted in the hands of its stockholders and the users groups.

Empowering communities
The inter-network equality of knowledge societies provides people with a powerful medium to voice their concerns about issues affecting them and develop linkages with communities and individual with similar concerns across geographical barriers. ICT is playing a lead role in formation of common cause coalitions, electronic networks of solidarity and support among pro-peace, indigenous, workers and human rights groups and is bringing people together like never before.

Virtual communities is the upcoming powerful force of

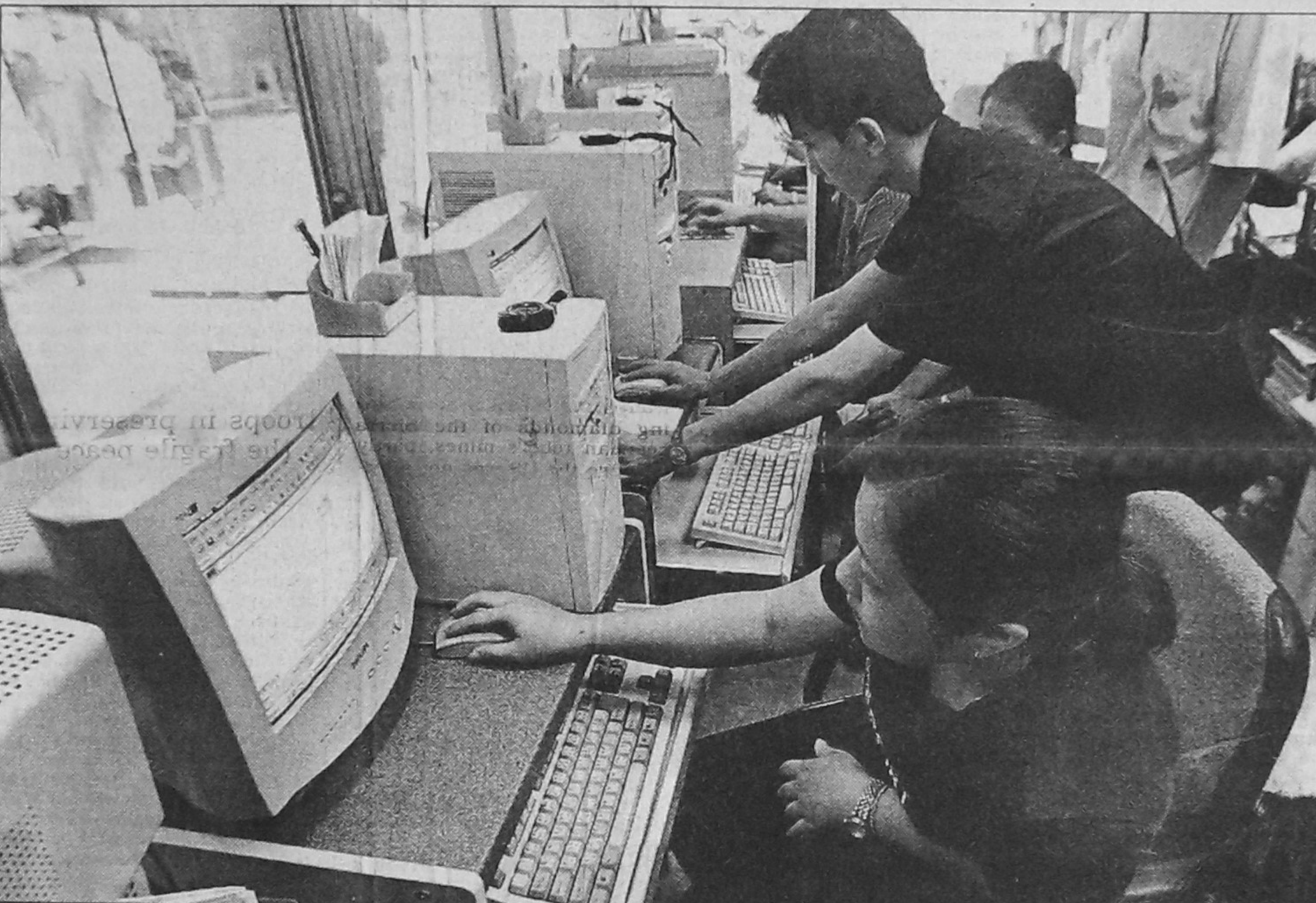
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these concerned, empowered individuals and networks which can act at all levels. The juggernaut of this virtual community was witnessed in the recently concluded WTO meet in Seattle in 1991 and the World Water Forum in the Hague in March 2000. Intensive discussions and exchange of views taking place years before the start of the meet over the internet by individuals and communities spanning nations converged into a powerful voice to resist some of the decisions being taken. Virtual communities may not have a geographical, hierarchical orientation but they are emerging as global watchdogs and advocates and no longer decisions affecting the masses can be taken in isolation and without a larger public debate. In a way, knowledge networking becomes a mechanism to bridge the gap between micro-level activism and macro-level policy discourse.

Better governance

On the face of it, the core principles of a democratic set-up are violated when people are excluded from the decision-making process and have little control over the process of their own development. People have the power in democracy and in this age where information is power, through access to information people become the root to a thriving democracy. If all the information is stored digitally, it could easily be put into public domain enabling easier access by a cross-section of users.

The key element to better governance is to democratise people's knowledge and understanding of complex social, economic and welfare mechanisms and processes, and to demystify the political choices available to their elected representatives. The Andhra Pradesh cyber model in India has proved that good policies and clear vision need to be shared with people and their support cultivated for effective governance.



Teenagers' innate affinity to technology can be transformed into a potent tool for sustainable development.

The comparative advantage for developing countries, especially those in the South Asia region, is its richness and diversity of the human resource capital. Creation of knowledge societies starts with the incubation of knowledge in human minds — a process dependent both on the individual and the external environment. Knowledge when combined with capital, labour, existing knowledge and other inputs produce goods and services and is thus a factor of productivity.

Better valuation of resources

In many parts of the developing world, farmers are solely dependent on farm income for their livelihoods. The farm gate prices for the crops are rarely constant and keep on fluctuating across different trade markets. In such cases, knowledge networks could supply information about farm gate prices for a particular crop prevailing across different agricultural markets to enable farmers to sell their produce in markets which fetch them the best returns—there by eliminating the need of a middlemen and reducing the risk of panic selling.

Employment generation

The spread of knowledge societies has the potential to create enormous job opportunities. Evolution of such societies require skilled and trained knowledge workers—such as web-designers, web-searchers, information scientists, researchers, etc who can perform specific tasks of understanding, compiling, analysing, providing value-addition and disseminating information. Personnel for low-level white collared jobs would be sourced from places where there are skilled knowledge workers available at competitive rates. Labour intensive jobs such as back office management, medical transcriptions etc could be performed by knowledge workers from anywhere in the world by making use of information and communication technologies. For example, Ford Motors is setting up its back office in India to handle its global administrative works relating to sale of automobiles. Thousands of knowledge workers in India who have the ability to understand and process information in English would be employed to undertake this job and it speaks volumes of the direction in which employment rate would increase.

Barriers exist in the mind

The knowledge revolution brings with it new opportunities but has also infused new challenges. Developing countries are however at very different starting positions in using the existent ICT infrastructure in the task of building innovative and distinctive knowledge societies. Often the forces in the wider sphere of influence and the existent policy frameworks are not in consonance with the overall development objectives to catalyse the transformation process.

Knowledge exists in the minds of the people — a fact which has been realised by many of the developed coun-

tries during their transformation to stronger economies. The human brain is a valued resource in such countries as is evident by the trends of brain-drain from developing to developed countries. Knowledge flows and emerges where it gets recognised, enriched and valued. The problem with many developing countries so far has been their inability to recognise the knowledge they possess, put a value to it and use the power of knowledge to their growth. Ironically, the value of the vernacular knowledge gets noticed in developing countries only after its value is recognised and put to use in the developed nations. The self-imposed barriers need to be removed if these countries are to be a part of the growth of the knowledge societies.

Comparative advantage for developing countries

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Access to technology

Who gets to access the information superhighway is the most pertinent question. Currently, around 50 per cent of the internet users are in the US; about 25 per cent are in Europe; and only 12-13 per cent are in Asia. One in every three Americans uses the internet, whereas only one in

Ultimately the right to information and open information-sharing forms the crux of knowledge societies. The culture of information-sharing and consensus building through avenues provided by ICT need to be fostered, especially in countries where there is very little top-down flow of information and information is confined in the bureaucratic bottlenecks.

Skills

Handling ICT, hosting of information and retrieving useful information from the net does require a fair amount of technical skills and net-literacy. In developing countries, the level of skills about computer use and internet navigation is extremely low. For example, if each of the over seven lakhs village in India have a person trained in the handling of Information and Communication technologies, then each of these villages would assimilate in to the knowledge network the money they get connected to the telecommunication backbone. Skills on ICT management therefore need to be inculcated across the population among all groups — children, youths, women and older generation at the individual or the community level.

Language barriers

Each day over two million pages are added on the internet but there is very small content representation on the net in the vernacular languages of the Southern countries. Further, with high rates of illiteracy in the developing countries, people who are unable to read the content, even in local languages, would be excluded from the knowledge sharing network. To eliminate the linguistic barriers, the focus of research and development in web-based technologies should be on making the content comprehensible to the end-users. This would lead to a virtuous cycle as availability of relevant content would push forward the demand for access and access by itself would also lead to creation of content. Private sector has an important role to play in making available open source software for developing content in local languages and for translation purposes. Further, the internet should not just be restricted to written-text format for information but should be widened to encompass voice-data, greater visual representation through use of locally relevant icons and use of hybrid technologies.

Policy Implications

Realistically the developing nations are not fully equipped to benefit from ICT. What is needed is greater guidance, enabling policy frameworks, and an open-ended learning approach on harnessing the potential offered by the new technologies and lead to their better diffusion, adaptation and effective use in development process. The government regulatory frameworks should be "de-bottlenecked" and instead let market forces develop and provide impetus to growth of the sector, for example, by allowing the private sector to have direct international connectivity to make riding on the information superhighway more affordable. Developing countries also need to both anticipate and accommodate rapidly changing advances in telecommunications, computing power and multi-media and at the same time invest in infrastructure essential to their propagation.

Government's intervention to harness ICT for development is imperative as it is both a policy maker which can catalyse the transformation to knowledge societies and is also the single largest user of knowledge products. In its role as a policy maker, the government needs to set up an information technology vision for the country to spearhead the knowledge revolution. Earnest attempts should be made to set fair rules for the to achieve the vision it set for itself. As a user of knowledge products, the government should itself start to function as an ICT-based model. Efforts should be made towards rapid digitisation of information to be made available in the public domain and to be hosted on the information superhighway for wider reach and value-addition. This, however, calls for a change in the governance mindset from restrictive flow of information to open flow of information. Several functions of governance can be efficiently carried out through greater participation of the people on switching over to ICT based model.

The state and the private sector will have a crucial role to play in creating a skilled, educated intellectual force with a strong penetration till the village and household level which can revolutionise the current approaches to development. The comprehensive approach to development would be the merger of both technology and human capital. The government and the private sector will need to extend incubator facilities to creating new models for solving problems relating to development sector by fostering formation of *dot.orgs* along with *dot.coms* so that the info-tech revolution does not side-steps the development sector with the mere assurance of trickle-down effects from the mainstream developments. Last but not the least, the government and the private sector should be brave enough to explore new pathways and new destinations because there is no one way to go and no one way is the right way.

Partners in Development

In the last decade, a number of new interesting partnership have emerged and many of the existing global institutions have re-designed their development mandate with the changing times to acknowledge the potential offered by ICT in spearheading towards knowledge societies. The World Bank has long recognised the critical role that knowledge plays in promoting economic growth and social progress. The World Development Report 1998, subtitled knowledge and Information for Development recognise the existence of knowledge gap and the fact that successful development entails closing the gap in knowledge. The Global Development Network (<http://www.gdnet.org>) initiated by the World Bank aims to serve the needs of researchers and institutions in creating high quality and policy relevant research to close gaps in the market research for development knowledge. The Global Knowledge Partnership (GKP) (<http://www.globalknowledge.org>) is another major step forward in the direction of global knowledge societies. GKP is an evolving, informal partnership of public, private, and not-for-profit organisations from across the globe. The recently concluded Global Knowledge Conference II in Malaysia reinforced the conviction that access to, and effective use of, knowledge and information are increasingly important factors in sustaining economic and social development. Further, initiatives such as NetAid of UNDP will enable people in North to offer their expertise to people in the South, by becoming virtual volunteers for skill development and capacity building.

Ultimately, evolution of knowledge societies by itself cannot be an answer and elixir to all problems facing sustainable human development, though it does bring in new information resources and can open new communication channels for the marginalised communities. This is because the formation of global knowledge society is under no single control as information available in the public domain is free to flow everywhere and all people have equal rights to it. The value therefore accrued to an individual user through the availability of information is different and this has the potential to further widen the economic and knowledge gap, especially in cases where people are not conscious of what they know or the potential value of absorbing the available information.

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