Information Technology - Need of the Hour Rural Development

PROF. MANOJ DAYAL*

ABSTRACT

Information Technology is today becoming as important as ‘roti’, kapra, aur makan’ (bread, cloth and house). In 40's people used to believe in secrecy of information. But in this new millennium, the concept is totally reversed. Now we like to share the information. Information is thus emerging as more and more power. Studies confirms that this field confidently predict that the poverty line will no longer be measured in terms of money, but in terms of information. This study examines the evolution of technology which is responsible for widespread penetration of computer technology in to the social fabric. Primarily the need of efficiency in complex organizations led to greater demand for availability of accurate and timely information. Information technology respond to this challenge.

Well known communication scientist Marshal Mcluhan predicted in his pioneering book “Medium is the Message” that due to information revolution the world would become very small. So small that it will be described as “Global Village”. His prediction is now turning out to be quite true.

Information Technology (IT) is today becoming as important as ‘roti’, kapra, aur makan’ (bread, cloth and house). In 40’s, people used to believe in secrecy of information. But in this new millennium, the concept is totally reversed. Now we like to share the information. Information is thus emerging as more and more power. Experts of this field confidently predict that our poverty line will no longer be measured in the terms of money, but in terms of information.

* Professor & Chairman, Dept. of Mass Communication, Guru Jambheshwar University, Hisar (Haryana)
It is not merely the evolution of technology which is responsible for wide spread penetration of computer technology (a part of IT) into the social fabric. Primarily the need of efficiency in complex organizations led to greater to greater demand for availability of accurate and timely information. Information technology respond to this challenge. New areas of computer science and technology emerged. On line systems, database management systems, management informations systems, computer communication networks, office automations artificial intelligence etc. The technology in turn influenced the society, development and social environment. Today the way people do the shopping, banking, booking of tickets, planning travels and so on in the developed world is entirely different from that exercises a couple of decades earlier. That is to say that in this age of information revolution, information technologies are being used in almost all walks of life. Today in every walk of life, Computer Internet, Mobile global stationary fax, e-fax video text tele text video conferencing, teleconferencing, compact disk, digital camera, video display terminals, satellite, space craft, cable optical fibre, DTH etc. are turning out to be extremely important.

As for as developing countries are concerned, history of computerization is quite different from the one obtaining in the developed societies. Earlier there was no much demand for computer when it was introduced in asian and American countries. Historically computers were first introduced in government administrations for accounting and inventory control in indian airlines and railways and Bharat Heavy Electricals Ltd. (BHEL) in early 60s. But computers have felt their presence in every walks of life.

Information technology raises productivity, quality and efficiency. Hence forth it provides competitive advantages in domestic market as well as in the international market. It has the capacity to transform the international social structure. Its also changes the complexion of existing employment opportunities by substituting the the unskilled and skilled work force with skilled and trained IT professionals. The real benefits of IT lie in its rapid diffusion in the government organizations, which are discussed here one by one.

The transport sector namely, the Indian Airlines and Railways was the first to introduce the use of computer systems for accounting and inventory control ad for other sector has continued to benefit further over the last twenty years through the use of online Real Times Reservation Systems and large computer communication networks spanning across the country and connected to international networks.
Reservation systems have also been implemented on the large railway throughout the country. The on-line reservation systems provide great relief to the common man who was much harassed for seeking reservation through manual modus operandi. These systems have thus attacked a large number of international tourists in India and have also enlarged the domestic tourism.

Industries in India have highly benefited from the use of Information Technology through Appropriate Automation Programmes. Prominent among these industries are steel, heavy electricals, locomotives, Textiles, Paper and Pulp, Process, Control etc. The application have gone far beyond inventory management and control. Complete production planning and control systems have been implemented in large number of industries. The systems have been integrated within particular industry as well connected across diverse geographic locations throughout the country using computer communication networks. Computer Aided Design techniques have been used along with graphics and other modeling tools in many of the industries concerned. The requirements of process control tools are used along with appropriate computer communication networks. Numerous industries in the areas of mining, control and instrumentation, machine tools now have been embedded IT systems without which the industries can not function. IT has thus directly contributed to increased industrial production.

Computer and other information technologies can be used to a great extent in proper distribution of seeds, grains from and to the markets, price monitoring and fertilizer distribution throughout the country are some of the areas where computer based information systems have been fully implemented. These systems are fairly complex in nature using optimization techniques and taking advantage of nationwide computer communication networks. Large irrigation projects which are critical to development in agriculture sector are being closely monitored on an online basis through the use of IT.

The role and application of Information Technology has expanded tremendously during the last decade in rural finance. It has contributed to faster cheque clearance in the banking systems, better book keeping and improved customer services. Increased automation transaction through ATMs in even small cities and villages. The fund movement has been made much faster through the setting up BANKNET in smaller cities and villages of India. As through further connectivity of banks with SWIFT Networks for international fund transfer. Such connections are critical for international banking and trade and hence adversely affect the balance.
of payments. The latest entry is introduction of Electronic Data Interchange (EDI) in the country for keeping the Indian trade competitive and at par with the international trade direction of paperless document. Appropriate gateways have been provided to connect with international networks for facilitating EDI on an international basis.

The Life Insurance Corporation and general Insurance Corporation even at rural level have both been benefited tremendously through the use of IT. The Stock Exchanges in the country are being fully computerised to facilitate faster settlement of trading, and also to introduce new concept of ringless trading. These are being connected through the use of IT. The Stock Exchanges in the country are being fully computerized to facilitate faster settlement of trading, and also to introduce new concept of ringless trading. These are being connected through computer communication networks for quicker settlement and proper service to the investors so that the untrapped areas of investment are brought into productive sectors of economy in the country to boost industrialized production and the service sector. Bombay Stock Exchange has already been computerised and other smaller exchanges are also at various stages of mechanization.

Lastly the Commerce Sector even in small cities and villages has also been largely benefited from the use of Information Technology. National Centre of Trade Information is in the progress of being implemented, which would facilitate much faster dissemination of trade information and contribute to boosting exports from India thereby helping in reducing the trade deficit and adverse balance of payments positions.

India has thus made considerable progress in Information Technology hardware and software. There are nearby umpteen number of hardware manufacturerers who are making computers, peripherals, communication equipment including modems and earth stations. The manufacturer includes the latest computer systems in collaboration with a number of well known international companies. There has been tremendous productions of fax machines, multimedia, satellite communication networks and various printing equipments ranging from letter press to multicoloured web offset and from composing to desk top publishing(DTP) and even computer to plate (ctp) in developed countries like US UK and Japan.

The Hardware Industry in Indian is Growing at an Annual Rate of 25%-30%

The Indian software industry is extremely vibrant. There are almost 150 software houses in India which are engaged in the development of
software in the domestic market as well as exports. Software export houses in India include nearly all the countries in Europe, USA, Australia, middle east and some other developing countries.

Considering the growing importance of NIT in rural development, the govt of India must decide on its strategies to employ NITs in agriculture. The latest developments in Indian Information technology must be applied for overall rural development. As far as telecommunication is concerned, India has the largest telecom network of Asia. On the other hand the govt has emphasized on privatisation of telecommunication sector to provide cheap and qualitative services to the rural people.

Moreover, the directorate of Extension, govt of India should try channelise broader agriculture extension with the help of NITs. The most important aspect here is to use these technologies at various utilization levels, i.e. Government bodies and organization, agro-industries, educational and research institution, planning bodies and organization, agro industries, educational and research institutions, development agencies and ultimately at the farm level for mutual exchange of information. With a view to achieving better results, these agencies can be operationnalised in to a massive network connecting block, district state national and international levels.

At block level an “Agricultural Information Centre” should be established for location specific agricultural information to villages. In addition, setting up of small video production centre may be instrumental in training the farmers and extension workers. Moreover facsimile, teleprinters, teletext and video text can be used for communication of information as per needs.

Thus at village level, the Information Shop may be very useful in collecting the location specific crop, soil, weather information from block centers through teleprinters, telephones audio and video cassettes, farm publications etc.

Thus the role of IT has reached from peak pinnacle in India.

As rural development is concerned information technology have played a vital role. The SITE of India are palpa experiment of Indonesia are glaring examples of their rural upliftment. The SITE demonstrated the potential of satellite system to give a geographically and socioeconomically diversified population, access to a wide range of information on agriculture, health nutrition and education. On the other hand the chennai experiment on computer-aided agriculture extension
system of M.S. Swaminathan research foundation is an innovative approach designed to test the relevancy of NITs under India conditions. In this experiment, the information shop, "which is located in the village, collects the localized agricultural information through computerized networks and disseminated through electronic bulletin boards, video cassettes and radio to farmers.

In addition, computerisation of rural information system projects (CRISP) in Gujarat was launched by the govt of India to test the feasibility of computerization of DRDA’s for an effective implementation of IRDP. A case study conducted by Shirin Mdon on CRISP shows that the introduction of microcomputers resulted in more empowerment among rural administrations. On the other hand, ICAR has proposed a plan to modernize its agricultural research information systems (ARIS) with the help of NITs. For example, the VSATs, LAN, WAN are being installed and linked to its research institutions. At the same time, Karnataka state agricultural Marketing Board (KSAMB) has initiated activities to build a marketing information system, "AGRI MARET" by using INTERNET for providing domestic and global market information and agricultural commodities to farmers.

On the other hand, Indian villages are facing numerous problems like poverty, unemployment, illiteracy, health and nutrition which will effectively hamper the penetration of NITs into villages. Hence, with the economic, social, political and cultural development in the villages, the technologies like teletext and video text, microcomputers may be used for communication with the farmers.

Indian agriculture has drastically changed after liberalisation, globalisation, marketisation and privatisation. The shift towards commercial and export-oriented agricultural demands an information-based approach to agriculture communication. Undoubtedly, the NITs offer great scope for collection and dissemination of agricultural and rural information. The experiments conducted by various industrialised and developing countries accumulated the rich experiences of information technology utilization in agriculture. Enriched with the abilities of interaction, demassification and asynchronisation, these technologies opened up a new way to decentralised development.

By considering operational contextual and strategic problems, there is a need to formulate a comprehensive strategic plan. There is a need to formulate a comprehensive strategy to use these technology in
agriculture. This strategy must include the application of appropriate NITs at international, national, state, block and village levels.

References
Sivakumar,P.Sethuraman(1998):”NITs a boon for farmers” published in COMMUNICATOR, April-June, 1998 Vol.32, No.2