

Information Technology and Rural Development: An Agenda for Good Governance

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Abstract

The issue of governance has received a serious attention from all the sections of society including academicians. It is now not only occupy a central stage in the development discourse but also considered as a crucial element to be incorporated in the developing strategy. So improving governance is a natural objective of governments in all over the world. The modern governments have tried to provide what may be called good governance through introduction of management techniques into public administration. Developing countries including India have also made effort, due to necessity often arising out of public pressures, to improve or for sheer imitation of something in vogue, a tendency that is seen even in the matter of introducing e-government and e-governance. The power of information communication technology tools have opened up possibilities much beyond the improvement syndrome by permitting radical possibilities in decision – making, quick processing of data and information transfer by automated electronic methods instantly.

KEYWORDS: Information Technology, Rural Development, Panchayati Raj Institutions, Information Communication Technology (ICT)

Introduction:

Information and communication has always been an important and integral element of the growth of any civilization. Rapid technological advancements in this field reinforce this fact. With the advent of 'digital age' information has become the primary source for socio-economic development. In the present era of information technology (IT), it is not the roads or bridges, but it is the IT superhighway and feeder – links through which the nation can develop. Information has come out to be an important resource and if exploited properly can work wonders.

Information Technology facilities the acquisition and absorption of knowledge, offering the government un-precedence opportunities to enhance educational systems, improve policy formulation and execution, and widen the range of opportunities for businessmen and the poor. It has the potential of enhancing system capacity, widening opportunities and institutionalizing innovations. Information technology has been found to facilitate informed decision making in public administration thereby improving its efficiency and effectiveness in delivering the services. It enhances and analytical capacity of administrative officers, thereby promoting comprehensive monitoring and assessment of the performance and welfare activities and their impact on the life of people.

In the present paper an endeavour has been made to discuss the application and importance of information technology generally in rural development and particularly in panchayats. Indeed internet communication is not the whole and soul of rural development but such networks certainly create new information resources and can open

new communication channels for rural communities and agricultural organizations. Thus, it can act as a catalyst in speeding up the entire development process of panchayats.

Earlier, the data and information were preserved on papers or some other modes creating enormous problems of space and reproducibility. Now these problems have been overcome as a result of introduction of cyber media having no space and time limitations. This paradigm shift is also heavily marked in the business sector through electronic commerce (e-commerce), government operations on line (e-governance), on line education (e-education), mailing through computers (e-mail), development of human interpersonal relationships (e-communities), data management and retrieval, etc. India's participation in IT developments is going to create a fundamental change in our value systems, quality of life, thoughts and visions and moreover to put the country on the path of acquiring a status of developed economy.¹

Thus, it has emerged as an effective instrument to bring masses closer to the government. To capitalize India's advantage in this sector, the Centre's and the states' IT policies emphasize application of IT to bring out SMART (Simple, Moral, Accountable, Responsive and Transparent) governance. And with Seventy-Third Constitutional Act, Panchayati Raj Institutions (PRIs) are no more 'units of self government' (Article 40), rather they are now 'institutions of self-government' (Article 243 d and g). Like any other government they are also endowed with the responsibility of monopolistic services, facilitator services and social security services under Part IX and Schedule XI of the Constitution. The cutting-edge of the government provides an opportunity, not only to improve these services with the help of IT, but also to bridge the digital divide. The working group on IT for Masses perceives IT providing a unique and new opportunity to address age-old problems in the field of education, health, rural development, poverty alleviation, employment etc. and be a major facilitator for information transparency, good governance, empowerment, participative management and grass root democracy.²

Objectives of IT for Rural Development

E-Panchayat does not mean merely computerization of backroom offices, but encompasses a wide range of activities and actors in rural and agricultural development organizations. So some of the possible objectives of IT towards Rural development are:

- To sensitize policy makers to the realities and need of rural populace.
- To develop locally appropriate applications and creative services.
- To provide knowledge about successful development strategies and sharing of data amongst different tiers of PRIs. This would help in better coordination of resources, comprehensive Planning and effective implementation.
- To improve transparency and accountability in the transactions of PRIs.
- To obtain the information about the related laws and rules of rural development.
- To increase interaction between panchayats and concerned employees for work guidelines, rules, regulations, salary structure and training modules of rural development programmes.
- To provide improved access to a huge variety of information, research and educational resources that are usually unavailable in rural and remote areas due to costs associated with accessing printed materials and books.
- To enable rural young people to learn about computers and to have access to technologies and information available to their urban counterparts.
- To provide access to critical technical information for rural professionals such as

physicians, health care workers, technicians and engineers thereby providing further encouragement of these professionals to continue practicing in rural and remote communities.

- To use as a marketing tool to promote rural tourism, rural products of small secondary industries and home based business.
- To enable local non governmental organizations (NGOs) to gain global presence and make better contact with potential donors and supporters through online publication of resources and information, and through the use of electronic mail.

Application Areas of Rural Development

The major application areas of rural development are as follows:

A) IT and Agriculture

Rapid agricultural growth is essential for poverty alleviation and overall economic development. Agriculture alone contributes about one fourth of the gross domestic product (GDP) and is the source of livelihood for nearly two-thirds of the population.³ So, information services to farmers should be improved through the creative use of the information technology. National media like radio and television covers the agricultural issues only at macro level because of time shortage i.e. the programmes like Krishi Darshan, Khet Khalihan and Krishi Paricharcha etc. The State media looks after regional disparities in agriculture. Internet can go a step further by providing the individual solutions round the clock in local language by creating knowledge tree using audio and video clippings.⁴

Rural portal is envisaged as a search engine that can act as a guide to the existing agriculture related web information and web services. It will support locating relevant information on the portal or forming other rural websites via the area-wise classification. Rajasthan government has launched a pilot project on ground water information system that provides the comprehensive information about the ground water availability of the selected locations.⁵ Thus using this proposed rural portal, farmer can easily seek answers to his specific questions like cropping strategy for farmer's field based on integrated information on soil, weather, fertilizer, pest management models, how and where to get the proper seeds or nursery plants, prevailing prices of the various tools and farming machines and products and series of such set of information, which can lead to the most efficient yield and optimum cost/benefit to the farmer.

Geographic Information System (GIS)

Geographic Information System is very useful in studying agro eco-regions, characterization studies, trends and pattern in agriculture, drought monitoring, crop yield estimates, disease spread and forecasting, run off and soil loss estimation etc. This system can be widely used in land use analysis, soil type mapping, and watershed planning which facilitates to decide on the type of crop to be raised, planning for moisture conservation and water harvest.⁶

E-Agriculture Markets: Farmers' needs vary with season, crop, weather and location. So, most of agri-business services are regional in nature. Many farmers don't have so much of time or information access to make and implement informed marketing decisions because commodity prices are always changing. So, they can get information on comprehensive grain marketing and risk management programmes from any e-commerce site based on agriculture just by clicking on a link. This also can give the farmers peace of mind, and ability to concentrate more on producing their crop. Acquiring inputs like seeds,

fertilizers, pesticides, agricultural implements etc. is possible via e-agricultural markets from anywhere in the world. At present personal credit card is the effective mode of payment for e-commerce which is a cumbersome method for farmers in availing e-agricultural market facilities.⁷

E-Weather: The growing of crops to feed the populations of the world is directly affected by climate change. Food production is totally dependent on favorable growing conditions. Role of IT in weather forecasting is two-folded i.e. generating weather forecasts and its dissemination to the farming community.⁸

B) IT and Rural Development Programmes

At the implementation stage of the rural development programmes like poverty alleviation programmes and empowerment etc., application of IT can lead to better resource mobilization and deployment, manpower management and technical support. IT can make quick, comprehensive and transparent impact – assessment possible, which can produce better implementation of the projects and plans. Like, in case of Assam, the NIC has introduced software, called Rural Soft 2000 to improve the monitoring of rural development schemes. This software can be installed in the PRI's networks. The Union government has launched a project of connecting 160000 villages through internet to ensure speedy rural development. The on-line management and monitoring system will make information available to MPs, MLAs and the public at the click of mouse. Thus, IT makes decentralized and participatory planning a smooth and simple affair and helps in realizing its inherent benefits i.e. efficiency, equality and empowerment.⁹

C) IT and Rural Industrialization

The setting up of agro-industries assumes a great significance and holds great promise to bring about substantial improvement in the quality of life. The promotion of agro-industries forms an integral part of overall development strategy to provide a sound and stable foundation for industrialization. They promote local entrepreneurship, generate employment and provide jobs for rural workers as well as put a check on rural-urban migration. Presently, the annual production of fruits and vegetables is around 113.00 million but only 1.80 percent is being processed. Similarly because of the lack of proper agro-based industries in the area of food grains nearly 20-30 percent of the output deteriorates every year.¹⁰ So IT can provide the information of maximum processing the fruits and vegetables and for boosting up of rural industrialization.

D) IT and Rural Women Empowerment

As far as the women's empowerment is concerned, it is about gaining autonomy and control over one's life which includes many dimensions such as economic, social and political. Attaining the income security, ownership of productive assets and the entrepreneurship skills are the three aspects of economic empowerment. Use of IT for women's empowerment cuts across various fields such as helping women improving agricultural productivity in their farms, encouraging them to become entrepreneurs and information intermediaries. The United Nations Development Programmes has started a telecenter project in Ukraine which applied the information technology to agriculture in support of the women farmers. The success story reveals the role of IT in improving the decision-making capacities of women in agriculture. In India also Warana Wired Village Project (Maharashtra) and Gyandoot Project (Madhya Pradesh) initiated IT projects for agriculture development. In the case of Gyandoot Project through Soochalayas (information KIOSKS) women can send their complaint with assurance of reply within a

maximum period of seven days. Complaints regarding drinking water, functioning of schools, public distribution system, and beneficiary oriented schemes etc.¹¹

E) IT and Education

Subject to state laws, primary and secondary education; technical training and vocational education and adult and non-formal education are the responsibility of the PRIs. Under the Satellite Instructional Television Experiment (SITE) scheme in 1975-76, TVs were provided for spreading education, but the convergence of IT tools enables interactive learning. Later, with the commissioning of INSAT system in 1983, a variety of educational programmes is being telecast. In the 1990s, Jhabna Development Communications' Project (JDCP) and Training and Development Communication Channel (TDCC) further demonstrated the efficiency of tele-education. With the success of the INSAT based educational services, a need was felt to launch a satellite dedicated for educational services and Indian Space Research Organisation (ISRO) conceived the EDUSAT Project in October 2002. The 1950 Kg EDUSAT was launched on September 20, 2004 from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota, into a Geosynchronous Transfer Orbit (GTO) by ISRO's Geosynchronous Satellite Launch Vehicle (GSLV).

EDUSAT is primarily meant for providing connectivity to schools, colleges' universities and also to support non-formal education including development communication. The scope of the EDUSAT programme is planned in three phases: In the first phase of pilot projects, a Ku-band transponder on board INSAT-3B, which is already in orbit, is being used. In this phase, Visves Waraiah Technological University (VTU) in Karnataka, YB Chavan State Open University in Maharashtra and the Rajiv Gandhi Technical University in Madhya Pradesh are covered. In the second phase, the coverage will be extended to two more states and one national institution. In the third phase, EDUSAT network is expected to become fully operation. These numbers are likely to raise many folds as institutions gain familiarity and confidence; and as the technology would spread it finds new users. So EDUSAT in its seven years life span will provide a substantial boost to countrywide distance education in India.¹²

F) IT and Training

Training of numerous functionaries as well as selected representatives has emerged as one of the most challenging areas in the effective functioning of the PRIs for rural development. Training is not one time process; rather it needs time-to-time administering on the recipients. Developing appropriate training module needs expertise. IT can help in easing the difficulties faced in the area of training through District Panchayat Local Area Network (LAN) and internet, Video conferencing, etc. IT can also provide cyber platform to share variety of panchayat related experiences from across the country.

G) IT Policies and PRIs

Working group on IT for Masses of the Union government recommends, "It is obvious that in order to have a visible impact of the benefit of IT on people, government must select major services at different levels such as services related to local governance at block/panchayat level, and re-engineer them through extensive use of IT."¹³ One of the objectives of IT policy of the Andhra Pradesh is to take internet to villages. IT policy of Kerala envisages modernization and integration of government functions using IT and to have internet kiosks in every panchayat ward, accessible to any member of the public.

One of the policy missions is the facilitation of decentralized administration and empowerment of people through the application of IT.

As a part of e-governance, IT policy of West Bengal emphasizes on the general information system (GIS) based planned at zila parishad level and setting up of websites for PRIs.

Karnataka has titled its policy as “The Millennium IT Policy: Information Technology for the Common Man.” To meet one of its objectives of eradicating poverty and empowering women, it declares to undertake computerizing village panchayats and building management information system (MIS) for the zila panchayats.

IT policy of Madhya Pradesh starts with recognizing its policy environment, which includes a staunch commitment to decentralization and administration and community participation in decision making through PRIs and urban local bodies.¹⁴

IT policy of Haryana emphasizes on the upgrading the standard and quality of administration, particularly in social and public services sector through a process of modernization and rationalization of the administrative set up and establishment of Haryana State Wide Area Network (HARNET) for voice, data and video transmission and dissemination.¹⁵

Making the concept of e-governance a reality, the Gurgaon district administration has set up e-disha common service centers (CSC) in the rural areas so that the villagers can get services like preparation of domicile, caste certificate, birth and death certificates, copy of land record, acceptance of application forms related to Indira Awas Yojna and other social welfare schemes of the government at their doorstep. Such services were being delivered to the people at the district headquarter so far and an e-disha centre was functioning for the purpose.¹⁶

Challenges in Implementation, IT in Rural Development

Excellent track record of India as well as of Indians in IT sector certainly makes observers highly optimistic towards e-governance, but challenges in terms of cost and regional variations no less daunting. Some challenges before government in case of implementation of IT in rural development are as under:-

- Challenge of creation of infrastructure at the local levels.
- Shortage of software and quality content in regional languages is another big barrier in the journey of IT implementation.
- High cost input in networking of PRIs is considered to be a major roadblock.

Suggestions: Some suggestions for successful implementation of IT in rural development can be given as under:-

- To encourage governments to support private sector knowledge and communication technology innovations and services together to rural and agricultural communities.
- A credit card should be made at panchayat levels so that each and every farmer under that panchayat would be able to use the credit card.
- Small pilot projects can help establish best practices providing avenues for sharing lessons learned and act as vehicles for expanding the impact of internet initiatives and enhancing coordination.
- E-Chaupal via video-conferencing from development by giving time to time development related information like to establish a direct marketing channel by linking mandi system for purpose of price discovery to reduce multiple handling

and transporting cost and making the farmers aware about the services related to credit agencies, insurance, health of human being and of livestock, education and entertainment.

- The concept of 'Community Information Centers' should be promoted. So community centers, schools, rural libraries, local NGOs, producer associations and health clinics can act as local hosts for community information centers.
- Liberalization of the information technology policies in rural areas.
- To encourage the promotion of rural and remote internet infrastructure development through low interest loans for purchase of equipment tied to participation in rural services, free use of leased lines in the initial stage and assistance with the provision of user support, training and awareness generation.

Conclusion

India is a country of villages and their socio-economic transformation always serve as an index to development. In the era of globalization, liberalization and privatization, it is important to emphasize on rural development because the transformation of rural areas is an indicator of the nation's economic development as well as good governance. In this regard, information communication technology (ICT) is an important feature of good governance and plays an important role in bringing in this transformation extensively by rendering effective and varied delivery channels to reach the target groups in rural areas; empowering people through knowledge and information creation and dissemination. So, by building up technical, managerial and design capacity in the adoption of ICT for rural communities and scaling up of rural ICT initiatives across disseminations of depth and breadth will ensure rural development to reach the rural poor and disadvantaged. It is an agenda before good governance to use the ICT as a strategic innovation and not as a tactical automation in this effort.

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