

Role of Information and Communication Technology in Rural Development: The Way Forward

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Abstract

The concepts, methods and applications involved in ICT are constantly growing in our daily lives. The Rural development in India is one of the most important factors for growth of the Indian economy. The present policy of rural development mainly focuses on poverty alleviation, better livelihood, provision of basic facilities and infrastructure facilities. Even after so many years after independence India have not been able to move to the stage of “developed nation”, the nation is still developing. Application of ICT is a paradigm shift to the traditional approaches that the government has been using for past many decades. With the use of ICT, government renders services and information to the public using electronic media. With the rising responsiveness amongst the citizens and their better experiences with the private sector– the demand for better services on the part of government departments became more pronounced. The blend of Information and Communication Technology is playing a prominent role in strengthening such a demand. Combining ICT in Rural Development can not only speed up the development process but it can also fill the gaps between the educationally and technologically backward and forward sections of the society

Key words: Rural development, Self-employment, Infrastructure Development, e-chaupal.

Introduction

Rural Development in India is one of the most important factors for the growth of the Indian economy. India is primarily an agriculture-based country. Agriculture contributes nearly one-fifth of the gross domestic product in India. In order to increase the growth of agriculture, the Government has planned several programs pertaining to rural development in India. The Ministry of Rural Development in India is the apex body for formulating policies, regulations and acts pertaining to the development of the rural sector. Agriculture, handicrafts, fisheries, poultry and dairy are the primary contributors to the rural business and economy.

Rural development is not entirely a new concept; it existed in India since Vedic times, but serious efforts approximating to what is today known as rural development were made only in the 19th century. Academicians divide efforts towards rural development in India into four broad phases or periods. The final phase is the post independence phase or period. In the post independent era, Government of India committed itself to bring about a rapid and sustainable development in rural

India through various programs. Over the years the thrust of the rural development programs have been on the all-round economic and social transformation of rural areas, through a multi pronged strategy, aimed at reaching out to the most disadvantaged sections of the society.

Information and Communication Technologies is being used by the government and non government organization for developing the rural and urban areas. In rural areas people are less aware. Due to this unawareness people can't easily communicate to the current market and each other. Government and non government projects applications are developed as pilot projects and it's aimed to offering easy access to citizen services and improved processing of government-to-citizen transactions. Information and Communication Technologies have transformed lives across India. According to the census of 2011, 68.84% of the population of India is rural whereas 31.16% is urban. These figures clearly indicate that India still breathes in villages.

India is a country of villages and about 50% of the villages have very poor socio-economic conditions. Since the dawn of independence constant efforts have been made to emancipate the living standard of rural masses. The five-year plans of the central government also largely aim at Rural Development.

The present strategy of rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programs of wage and self-employment. ICT is the new tool for rural development. Information and Communication Technology, if used properly can be of great advantage for the development at grass root levels. At the same time challenge remains with the administration to capture the minds of the rural masses, mostly illiterate, to make them adapt the new technology which is completely alien to them. There are various rural development schemes run by the government of India and also organizations are present to look after the implementations of these programs.

Review of Literature

Singh N (2014), 'Information Technology and its role in India economic development', paper discusses the various aspects of supply and demand of rural ICT based services on several ongoing projects of rural India. He pointed out several benefits of ICT and challenges of these projects (TARAhaat, ITC e-choupals, Aksh, Drishtee N- Lounge (WLL technology) associated with technical implementations and adaptations in terms of software, hardware and maintenance. He suggested that there is a broad range of services that can be provided to a cross section of rural households, even at relatively low levels of income.

Chitla Arath (2012) 'Impact of Information and Communication Technology on Rural India', paper discusses how ICT can be used to promote developmental programs. She suggested that an integrated framework for ICT interventions in rural areas is required for community needs, knowledge and inputs along with inputs of other stakeholders to eradicate poverty.

Chandrasekhar and Ghosh (2011) 'Information and Communication Technologies and Health in Low Income Countries: The Potential and the Constraints' paper outlines the potential offered by technological progress in the ICT industries for the health sector in developing countries. He suggested that there are three ways which can bring about improvements in health in developing countries. First, ICT as an instrument for continuing education enable health workers to be informed and trained in advances of knowledge. Second they can improve the health and disaster management services to poor and remote locations and third it can increase transparency and efficiency of governance.

Reddy (2011), 'Banks on rural India way to economic development' discusses the skewed distribution of bank branches. He suggested the need for e-banking services for the development of rural economy.

Aims and Objectives

Rural development aims at improving rural people's livelihoods in an equitable and sustainable manner, both socially and environmentally, through better access to assets (natural, physical, human, technological and social capital) and services, and control over productive capital (in its financial or economic and political forms) that enable them to improve their livelihoods on a sustainable and equitable basis. The basic objectives of Rural Development Programs have been alleviation of poverty and unemployment through creation of basic social and economic infrastructure, provision of training to rural unemployed youth and providing employment to marginal Farmers to discourage seasonal and permanent migration to urban areas.

Role and Function of the Government

The Government's policy and programs have laid emphasis on poverty alleviation, generation of employment and income opportunities and provision of infrastructure and basic facilities to meet the needs of rural poor. The introduction of Bharat Nirman, a project by the Government of India in collaboration with the State Governments and the Panchayati Raj Institutions is a major step towards the improvement of the rural sector. The National Rural Employment Guarantee Act 2005 was introduced by the Ministry of Rural Development, for improving the living conditions and its sustenance in the rural sector of India. The Ministry of Rural Development in India is engaged in legislations for the social and economic improvement of the rural populace. The ministry consists of three departments' viz., Department of Rural Development, Department of Land Resources and Department of Drinking Water Supply. Under the department of rural development, there are three autonomous bodies viz., Council for Advancement of People's Action and Rural Technology (CAPART), National Institute of Rural Development (NIRD) and National Rural Road Development Agency (NRRDA). The objective of the ministry can broadly be elaborated as to encourage, promote and assist voluntary action in the implementation of projects for the enhancement of rural prosperity, strengthen and promote voluntary efforts in rural

development with focus on injecting new technological inputs, act as the national nodal point for co-ordination of all efforts at generation and dissemination of technologies relevant to rural development in its wide sense and assist and promote programs aimed at conservation of the environment and natural resources.

Rural Development Schemes in India

Several e-governance projects have attempted to improve the reach, enhance the base, minimize the processing costs, increasing transparency and reduce the cycle times. Introduction of e-chaupal is of the initiatives by the government that has up to an extent been able to bring the rural population in contact with the information technology. The opportunities of ICT application in rural development are immense and at the same time the government will also be facing some challenges also. Since then many programs have been implemented. The followings are the few programs:

- a. Rural Connectivity Programme: The programme aims at 100 percent connectivity of rural areas through construction of all weather roads.
- b. Pradhan Mantri Gram Sadak Yojana (PMGSY): This is a scheme launched and fully sponsored by the Central Government of India. The main objective of the scheme is to connect all the habitations with more than 500 individuals residing there, in the rural areas by the means of weatherproof paved roads.
- c. Swarnjayanti Gram Swarozgar Yojana (SGSY): This was implemented as a total package with all the characteristics of self employment such as proper training, development of infrastructure, planning of activities, financial aid, credit from banks, organizing self help groups, and subsidies.
- d. Sampoorna Gramin Rozgar Yojana (SGRY): This scheme aims at increasing the food protection by the means of wage employment in the rural areas which are affected by the calamities after the appraisal of the state government and the appraisal is accepted by the Ministry of Agriculture.
- e. Indira Awaas Yojana (Rural Housing): This scheme puts emphasis on providing housing benefits all over the rural areas in the country.
- f. National Bank for Agriculture and Rural Development: The main purpose of the National Bank for Agriculture and Rural Development is to provide credit for the development of handicrafts, agriculture, small scaled industries, village industries, rural crafts, cottage industries, and other related economic operations in the rural sector.
- g. Rural Business Hubs (RBH): RBH was set up with the purpose of developing agriculture. The Rural Business Hubs Core Groups helps in the smooth functioning of the Rural Business Hubs.

- h. Council for Advancement of People's Action and Rural Technology (CAPART):
The main purpose of this organization is to promote and organize the joint venture, which is emerging between the Government of India and the voluntary organizations pertaining to the development of the rural sector.
- i. National Social Assistance Programme: The programme aims at ensuring minimum national standard of assistance to the poor households. The programme consists of three schemes, viz, National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) and the National Maternity Benefit Scheme (NMBS).

Challenges of Application of ICT in Rural Development

The basic challenges that usage of ICT for rural development faces are-

- a. Illiteracy amongst the vast multitude of people
- b. Major power-cuts and 'brown-outs' affecting the country-side ranging from 5 to 12 hours every day. Even though uninterrupted power supply systems are used; yet they prove insufficient to cope up with the power breakdowns
- c. Serious band-width issues and connectivity problems. Even though technology is available to upgrade the band-width; not enough resources have been budgeted by the Government to change this scenario. However once a few projects for the up gradation of the band-width on the anvil get commissioned, there should be a significant improvement in the connectivity
- d. Financing difficulties encountered by the local grass root level institutions as well as by the state governments. Drastic steps are needed to inject funds for the development of the ICTs in the rural areas; increasingly by the participation of the private sector
- e. Acute shortage of project leaders and guides who could ensure implementation of the ICTs at the grass root levels. Unfortunately most professionals want to work in the urban areas where there are ample opportunities available to them for growth as well as prosperity. In the absence of these 'techno-catalytic' resources; development of ICTs in the rural areas will always be very slow.

Expected Role of ICT in Rural Development

Since the dawn of independence, concerted efforts have been made to ameliorate the living standard of rural masses. So, rural development is an integrated concept of growth, and poverty elimination has been of paramount concern in all the five year plans. Rural Development (RD) programs comprise of following:

- a. Provision of basic infrastructure facilities in the rural areas e.g. schools, health facilities, roads, drinking water, electrification etc.
- b. Improving agricultural productivity in the rural areas.

- c. Provision of social services like health and education for socio-economic development.
- d. Implementing schemes for the promotion of rural industry increasing agriculture productivity, providing rural employment etc.
- e. Assistance to individual families and Self Help Groups (SHG) living below poverty line by providing productive resources through credit and subsidy.

Communication has been seen by a large number of development planners as a panacea for solving major social evils and problems. Apart from development, the introduction of communication in the educational process for open and distance learning is seen as step towards improving the quality of education and bridging the social and educational gap. ICT can be used towards betterment of education, agriculture, social awareness and health and hygiene.

ICT and e-Governance for Rural Development

Several states have initiated the creation of State Wide Area Networks (SWAN) to facilitate electronic access of the state and district administration services to the citizens in villages. The Information and Communication Technologies (ICT) are being increasingly used by the governments to deliver its services at the locations convenient to the citizens. The rural ICT applications attempt to offer the services of central agencies (like district administration, cooperative union, and state and central government departments) to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions.

Computerization of land records have been a great success in application of ICT in rural development. Land records are great importance to contemporary socio economic imperatives and their revision and up gradation are necessary for capturing the changes in rural social dynamics. Land records are an important part of rural development. The govt. of India started the centrally sponsored scheme of Computerization of Land Records (CoLR) in 1988-89 with main objectives of:

- a. Creating database of basic records
- b. Facilitating the issues of copies of records
- c. Reducing work load by elimination of drudgery of paper work
- d. Minimizing the possibilities manipulation of land records, and
- e. Creating a land management information system

The farmers were largely benefited CoLR. The farmers can get all necessary records when they need it, these records are free from human arbitrations, the updating becomes easy, free from harassment and the farmers had direct access to information regarding their property.

Conclusion

Although concerted efforts have been initiated by the Government of India through several plans and measures to alleviate poverty in rural India, there still remains much more to be done to bring prosperity in the lives of the people in rural areas. At present, technology dissemination is uneven and slow in the rural areas. Good efforts of organizations developing technologies, devices and products for rural areas could not yield high success. Experiences of many countries suggest that technological development fuelled by demand has a higher dissemination rate. However, in India, technology developers for rural areas have been catering to needs (with small improvement), rather than creating demand.

It is, of course, important to note that the proportion of the economy involved in some or other form of adaptation or usage of ICT is still very small. The proportion of people involved in the ICT Industry, especially in the rural areas is negligible. Thus, another priority action, in order for the benefits of ICT to trickle down as well as contribute to the rural prosperity, would involve setting up several rural and village level micro-enterprises. Information and Communication Technology has great relevance in today's world. If implemented properly ICT can surely bridge the gap between economically and technology backward and forward classes. With the IT boom in India technology is easily accessible to the government machineries with relevantly cheaper and convenient manner. Proper training and implementation of ICT programs in simple way and language which is easily understandable by the rural people can surely bring about revolution in rural development.

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