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APPLICATION OF ICT IN RURAL DEVELOPMENT: OPPORTUNITIES AND CHALLENGES

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Abstract**:** *We see the letters ICT, everywhere. ICT stands for Information and Communication Technology. The concepts, methods and applications involved in ICT are constantly evolving in our daily lives. The Rural development in India is one of the most important factors for growth of the Indian economy. The present strategy of rural development mainly focuses on poverty alleviation, better livelihood, provision of basic amenities 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. Public administration, governed by bureaucratic structures built on rationale principles, that dominated the twentieth century, has failed to respond to the changing requirements of the present times. Application of ICT is a paradigm shift to the traditional approaches that the government has been using past so many decades. With the use of ICT, government renders services and information to the public using electronic means.*

With the rising awareness 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 infusion of Information and Communication Technology (ICT) 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.

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 simputers, e-chaupal are some 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 at the same time the government will also be facing some challenges also.
This article majorly focuses on the scope of ICT in Rural Development, the opportunities and the challenges that can come along.

Key words: *RD Schemes, SITE experiment,CoLR, Illiteracy*

Introduction

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 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 diary are the primary contributors to the rural business and economy.

Rural Development which is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. The present strategy of rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programmes 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 programmes.

Rural Development Schemes in India

- *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.

- *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.

- *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.

- *Indira Awaas Yojana (Rural Housing):* This scheme puts emphasis on providing housing benefits all over the rural areas in the country.

Rural Development in India-Organizations

- *Department of Rural Development in India:* This department provides services such as training and research facilities, human resource development, functional assistance to the DRDA, oversees the execution of projects and schemes.

- *Haryana State Cooperative Apex Bank Limited:* The main purpose of the Haryana State Cooperative Apex Bank Limited is to financially assist the artisans in the rural areas, farmers and agrarian unskilled labor, small and big rural entrepreneurs of Haryana.

- *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.

- *Sindhanur Urban Souharda Co-operative Bank:* The main purpose of the Sindhanur Urban Souharda Co-operative Bank is to provide financial support to the rural sector.

- *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.

- *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.

Scope of ICT in Rural Development

Recent developments in Information and Communication Technology (ICT) have introduced a plethora of opportunities for development in every conceivable area. ICT as an enabler has broken all bounds of cost, distance and time. The fusion of computing and communications, especially through the internet has reduced the world indeed into global village creating new actors and new environments.

One of the major components and driving force of rural development is communication. Conventionally, communication includes electronic media, human communication & now information technology (IT). All forms of communications have dominated the development scene in which its persuasive role has been most dominant within the democratic political frame work of the country. Persuasive communication for rural development has been given highest priority for bringing about desirable social and behavioral change among the most vulnerable rural poor and women. Initially, the approach lacked gender sensitivity and empathy of the communicators and development agents who came from urban elite homes. Added to these constraints is political will that still influences the pace and progress of rural development. Technological changes further compounded the direction of rural development as information and communication technology (ICT) has been thought by communication and development workers as a panacea for other ills that obstructs the development process. It has lead to indiscriminate applications and use of ICT in every aspect of information dissemination, management & governance of development. While there are few shining examples of achievements of ICT in development, there are a large number of failures and unauthenticated claims.

The closing decade of twentieth century was the opening of historic information and communication technology interventions for development. This period has witnessed enormous and unprecedented changes in every aspect of communications technologies policies, infrastructure development and services. The ICT boom in India has already started changing the lives of Indian masses. The role of ICT in Rural Development must be viewed in this changing scenario.

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) programmes comprise of following:

- Provision of basic infrastructure facilities in the rural areas e.g. schools, health facilities, roads, drinking water, electrification etc.
- Improving agricultural productivity in the rural areas.
- Provision of social services like health and education for socio-economic development.
- Implementing schemes for the promotion of rural industry increasing agriculture productivity, providing rural employment etc.
- 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.

Experiences and experiments

Communication has been seen by a large number of development planners as a panacea for solving major social ills 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. However, experience indicates that those rich who could afford to have access to private resources have hogged the advantage whether development or education. In this respect it seems that communication technology has, in no way has helped the poor for improving their socio-economic condition. Primarily the responsibility of rural development remained with the government. In the pre-economic liberalization period, i.e. before 1992 broadcast media were used to reach the large rural population or target groups for the rural development projects. In the post economic liberalization period, rural development projects added information and communication technology (ICT) to provide individual need based information in broad development areas through Internet.

After independence, the government took upon itself the major responsibility of development. Hence, the central and state governments carried out development projects. Two such projects are briefly described.

Radio for Rural Development Popularly known as "Radio Farm Forum" was one of the earliest efforts in the use of radio for rural development. The experiment was carried out from February to April 1956 in five districts of Maharashtra State by All India Radio (AIR). Rural listener groups were organized, who would listen to radio broadcasts twice a week at 6.30p.m. for half an hour. "The group then stayed together for discussion of what they had heard, the discussion lasted usually, about half an hour, seldom less, frequently more". The summative impact evaluation indicated positive outcome of radio rural forum. Impressive knowledge gains as a result of radio listening were reported across illiterates and literates, agriculturists and non-agriculturists, village leaders and others. However, over a period of time the project withered away.

Satellite Instructional Television Experiment (SITE) is considered to be one of the biggest techno-social communication experiments in education and rural development. The one-year experiment (August 1975 - July1976) aimed to provide direct broadcasting of instructional and educational television in 2400 villages in states of Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan. Over 500 conventional television sets spread over 335 villages in Kheda district, Gujarat was also part of SITE. Satellite technologists had called SITE as leap fogging from bullock cart stage to satellite communication, which did not discriminate between rural poor and urban rich for information and communication. It had given 50 years communication lead to rural poor of the country.

SITE provided telecast for rural primary school children in the age group 5 - 12 years studying in grades 1-5. Rural adults viewed television programmes on improved agricultural practices, health and family planning. They were also able to view news. Television was considered as window to the world. The telecast reliability was above 99 per cent during the experiment period. More than 90 per cent direct reception television sets were in working.

Both quantitative (survey) and qualitative in-depth (anthropological holistic study) evaluation indicated modest gains in some areas, whereas no gain or negative gain in other areas. The one-year duration was thought to be too little for any positive results. Based on the experiences and positive gains, INSAT satellite was launched in 1981. Since then a series of INSAT satellites have been launched and used for nationwide television telecast for education and development. The sad part is that, in spite of best efforts, satellite television has been used for entertainment more than rural development. I am sad that my prediction came true that satellite television will be used for entertainment and not rural development.

Communication Technology and Rural Development in India could not be operationalised for large-scale implementation in one form or the other. Lack of political will and indifference of

bureaucracy killed the rural development project even before it could help poor to take advantage of radio broadcast.

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 updation 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:

- Creating database of basic records
- Facilitating the issues of copies of records
- Reducing work load by elimination of drudgery of paper work
- Minimizing the possibilities manipulation of land records, and
- 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.

Challenges of application of ICT in Rural Development

ICTs alone can't bring about rural development. Education is one of the basic problem for application of ICT as 40% of India's population is illiterate. All modern economies have demonstrated in the past that education is the first step to building the capacity which people can then use. If the Indian economy grows at 5-6 per cent per annum as it has been growing over last 2-3 years, then over 10-15 years the size of the Indian economy would have doubled. Even with this level of growth it cannot by any means bridge disparities and eradicate poverty. Therefore

introducing ICTs alone will not meet the development challenge. For ICTs to succeed in India, education for all must be the first priority.

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.

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

- Illiteracy amongst the vast multitude of people
- 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
- 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 upgradation of the band-width on the anvil get commissioned, there should be a significant improvement in the connectivity
- 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
- 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.

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 programmes in simple way and language which is easily understandable by the rural people can surely bring about revolution in rural development.