

## Role of ICT applications in Rural India

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**Abstract:** To achieve rural-urban amalgamation in growth activity, government of India has given priority to rural development. The nucleus of development is to reach the deprived section of society. Information technology is the powerful tool that has the capability to transform rural economy. ICT can help people to access relevant information. Development in ICT technologies has created a lot of opportunities for rural areas. There are still a lot of challenges for its maximum utilization.

**Keywords:** ICT, rural, e-governance, development

### Introduction

One of the major priorities of every nation is rural development. India is a country of villages, with 6 lakh villages and 70% of the total population resides in villages and rural areas. The socio-economic differences between rural and urban areas are increasing and creating tremendous pressure on the economic growth and social empowerment. The Information and Communication technologies (ICT) can play a major role to bridge that gap. Sustained development in rural areas is possible, only if ICT applications are able to respond to the local needs and modified as per the established knowledge of the rural areas. Rural communities can be empowered through ICTs and give them a voice that permits them to contribute to the development process. To maximize the benefit of ICT at grassroots, the interventions should be bi-directional. The infusion of a Citizen-to- Government (C2G) and Citizen-to-Citizen (C2C) interface would provide a link that would lead to community participation in designing and implementation of ICT interventions.

### Rural Development and ICT

The rural development involves economic growth and social development of the rural economies. It represents improvement in quality of life of people in villages. Sustainable Rural Development can help in reducing poverty, natural resource management, food security and shared growth. Hence the focus is on development of rural economy of the countries. The improvement in economic status of rural areas will bring down the migration to cities. The development process of a country is aided by its governance. The goal of governance should be to create needed opportunities for employment and other livelihoods. To provide benefits government should promote participation of citizens in the governmental decision-making process. Several institutions and experts accept Governance as a reflexive process, wherein policies, institutions, outcomes and analysis interact, to maximise the process of participatory development. Government have initiated programs like Village Resource Centre(VRC), Pradhan Mantri Gramin Sadak Yojna(PMGSY), National Land Record Modernization Program(NLRMP) to speed up rural development. ICT is an integral part of development strategies of a country. It has great role in socio-economic transformation by bring in the access to people. Government with the help of ICT provides information regarding its schemes to people. ICT has

emerged most effective tools to provide more opportunities to rural areas in field agriculture, markets, health, and education.

### **Application of ICT in Rural Development**

ICT has transformed the process of information transmission. The functioning of governance is to improve government processes and build interaction with and within civil society. The circulation of public information, grievance, billing and payment services and society participation in the governing process are managed by Government, is referred as E-government. E-governance acts as an intermediary between government and citizens. Such interactions provide accurate information about social problems to government along with their possible solutions. E-governance can provide timely information to the citizens that help in good governance leading to development of society. Applications of ICT in rural development sectors are:

#### **Agriculture sector**

Agriculture is the main source of income and livelihood for people of rural India though share of agriculture to total GDP has declined significantly. Due to its subsistence nature agriculture is still not considered as lucrative or commercial profession. Lack of proper understanding about the soil, seeds, weather, fertilizer utilization affects the land productivity. As increase in land productivity improves the economic condition of marginal farmers and development of the area.

With the use of ICT (real time communication) farmers can get information about irrigation, seed quality, pest control, climate, fertilizer and market prices. Using E-commerce applications farmers can directly connect to consumers and traders and will get them better market prices for crops. Soil quality, yield predictability and weather forecasting can be done with the use of Remote Sensing & GIS.

#### **Education sector**

For new generation education is the foundation of their future. With better education opportunities literacy rate in the rural areas can be increased and will create better employment opportunities and technical knowledge among rural people.

With the use of computers and internet, the people will not have to move to urban areas and they can learn by distance learning means. Recorded lectures of teaching faculties from other institutes will compensate lack of teachers and staff in remote rural areas. Youth of rural area can taught old age generation in their native places with the help of ICT.

#### **Health services**

Health care service is one of the fundamental amenities of any social setup. Government has setup hospitals and dispensaries for timely medical aid to its citizen. Villages lacks laboratories and specialized doctors.

ICT can help in the betterment of available health facilities in rural areas. Remotely consultation can be provided with the use of internet and other communication medium. Government is organizing presentations on health issues, nutrition, symptoms of diseases and steps to be taken for its prevention.

Business sector

People in rural areas can be benefitted from ICT for establishing, managing, supporting and boosting their business. Rural population can exhibit their product and its information using ICT tools. They can get bill receipts from vendors/suppliers. With the use of ICT they can get information about mandis and can access regulatory policy guidelines of the government. People can take advantage of government subsidies and other schemes available for micro and small scale industries. They can expand their market to other areas with the help of ICT.

### **Employment in rural area**

ICT can help rural people for employment opportunities as job vacancy notifications for government and nongovernment organizations are available online.

### **Social awareness**

With the use of social interactions through online platforms, rural areas has been connected to urban and has minimized the geographical barriers. People can connect through social media and social networking for social causes. Use of ICT increases awareness on various issues of social concern.

### **Banking facilities**

Government has launched various schemes to provide financial assistance, loans, bank credits and subsidies to people in rural areas.

ICT has made money transactions and credit and convenient with use of internet banking. Information regarding documents relevant for opening bank accounts are available online. Pension, loan approval, loan amount and instalments and other credit information can be provided on mobile phone.

### **Rural administration**

ICT provides access of the state and district administration services like public notification, regulatory information and upcoming government schemes to the citizens in villages. Information of skill development programmes and trainings are disseminated through website and broadcasting through national media. Training material and documentation are available on online portals. ICT can be used to take feedback, query and complaints of people from rural areas. ICT decentralize the initiatives and extend the reachability to more and more rural population. ICT helps in digitisation of land records and creation of accurate and comprehensive property record. ICT plays major role in disaster prevention, mitigation response and recovery. Timely prediction and effective information can play significant role in rescue operation and decision making process.

### **Challenges and solutions of using application of ICT in rural development**

- 1) Illiteracy: One of the main hurdle in deployment of ICT is illiteracy. Most of the people living in rural areas are illiterate. Government should educate rural people technically to use ICT applications.
- 2) Poverty: Most of the people are living under poverty condition. Their main efforts is to earn for daily living. Internet access need a big chunk their earning. An economical package for rural areas will help them to use it.
- 3) Lack of Awareness: There is lack of awareness concerning advantages of E-Governance as well as Government-to-Citizen (G2C) and Citizen-to-Citizen (C2C) projects. Advertising the schemes government is providing through e-governance will encourage them for its use.

4) Infrastructure: The connectivity in rural India is challenge due to vast geographical diversity of the country. Lack of infrastructure like electricity, internet and communication medium influence people to use ICT. Government must focus to improve infrastructure in rural area.

5) Language: The maximum use of English on the internet bounds access of non-English-speaking people. Lack of localisation of content for rural communities shrink back to use technology. Use of regional language will help people in better understanding of ICT application and will encourage them to leverage its maximum potential.

6) Hesitation to change: People in rural area are uninterested to change as to learn new thing they have to give extra time and effort. As e-governance means transform of the system from manual to computerize based, it is generally disliked by the employees and the general public. Motivating people to use ICT as they will help them in long term.

## Conclusion

ICT initiatives in rural development emphasise adoption of a more systematic approach to integrate with traditional knowledge. ICT impact rural economy and ensure sustainability of rural e-governance. With the use of effective applications and channels benefit can be attained in improving rural economy. Also government should work to popularize use of ICT in its development programmes. Rural areas people should be educated to use ICT effectively and efficiently. ICT brings transparency in economic and social programs of government. Govt should work to make ICT employment oriented in rural areas. ICT should be used to make rural people self-reliance and improve the quality of their life. Government should work to educate rural people so that they become literate and accept the benefits of technology.

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