International Journal of Innovative Technology and Exploring Engineering (IJITEE)
ISSN: 2278-3075 (Online), Volume-8 Issue-11, September 2019

Role of ICT in E-Governance: An Experience from Rural India

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Abstract*: In the Rural India, Information and Communication Technologies (ICT) plays a big role for the overall socio-economic development in the villages. Currently many more projects are going on in India, which is purely based on the e-governance mode. In spite of various hindrances, it is found that Indian is moving smoothly towards digitization. Rural E-Governance is a fresh concept of applications which has shown the importance of ICT in the realm of rural growth in India. As government of India has a dream to digitalized India by 2020, so now it is urged to understand the relationship between the application ICT and people or technology and society at a larger perspective. In this paper both the primary and the secondary data is utilized. For the primary data, the experimental method is used. The paper is purely based on descriptive and analytical methodology. In this paper, try to understand the role of ICT and the issues and challenges face in the rural India with a suggestion to combat with it.

Keywords: ICT, E-Governance, Rural

I. INTRODUCTION

Information and Communication Technologies (ICTs) now a day play an important role in the rural development through the e-governance in India. Today, development depends on the ability to access, collect, analyze and utilization of information and cognition or how fast the government try to plug into the polices with the public. Importantly, it has found that the Government of India decided to prepare all their communications with the public through the electronic mode at all levels by 2020. This is seemed as the requirement of the hour in the Indian society.

II. METHODOLOGY

This is a descriptive and analytical paper. The attempt has been made to include the details of the facts on the basis of experiences assembled from the various rural areas in India. Mainly present paper tries to understand the role of ICT in the E-Governance in India and its impact in rural India. Basically, this study is trying to analysis the report and papers published by various researchers in India and aboard on the ICT and E-Governance. Both the primary and the secondary sources are used in this study. For the primary sources of information purely based on the data gathered from the villages of India. Discussion is been done with the common local people of the different villages regarding the application of ICT. Besides these, local leaders of Panchayat, educated youth, including the office bearers are also selected to gather the information to know the use of ICT with a pragmatic outlook.

III. CONCEPT OF E-GOVERNANCE

E-governance means the use of the application of ICT by the government in all it functions from execution to service delivery system. "Thus e-governance is the application of information and communication technology for bringing government facilities, exchange of data, communication, transactions, integration, and services between government and citizens, government and business as well as back office procedures and communications within the entire government framework" (Srivastava, 2017). E-governance is an attempt to bring the efficiency, transparency, and citizen's participation. Thus, it finally tries to establish good governance in the society where everyone will get everything without having any barriers (Izhar Ud Din, 2017).

But by and large, the ICTs means the application of any communicative device or the application of television, computer, wireless, mobile phone, hardware or software and satellite system which enable users to access, store, transfer and control data (Izhar Ud Din, 2017). This system gets some positive outcomes in a scheme such as low cost, enhance service delivery, and increase in transparency and quick interaction between citizens and government.

IV. ICT AND E-GOVERNANCE IN INDIA

As India is basically a rural and agricultural base country, it is the high time to implement the National E-Governance Plan (NEGP). This plan has to be started from grassroots' levels. In this direction, government of India has implemented e-governance applications system through the use of Information and Communication Technologies (ICT).

Government of India through the Ministry of Electronics and Information Technology implemented the E-Governance projects through the National e-Governance Plan (NEGP), to bring the efficiency and effectiveness in citizen-centric services, socio-economic transformation, especially in the fields of education, health, skill-building, entrepreneurship and in creating employment opportunities. Keeping in view, Ministry of Electronics and Information Technology (MEITY) has established the Centre for E-Governance (CEG). This Centre has been operating as a platform for using ICT domain especially in E-Governance in India. Following figure is indicating the ongoing projects in India through the use of e-governance.

Manuscript published on 30 September 2019.
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Figure indicating the Projects use ICT in the National Level in India

Fig. 1. Projects using ICT

V. ICT AND RURAL INDIA

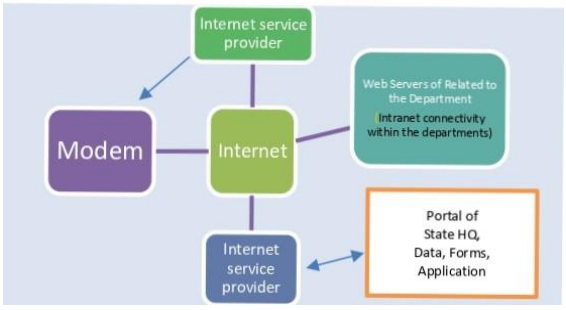
In India, ICT is used in the rural areas to facilitate the village people by providing services for healthcare and education, improving the literacy rate in the rural area, and also to provide information and knowledge to the farmers to improve their productivity. Besides these, try to establish multimedia services through which information can be delivered at the doorstep.

The need of rural e-governance through the use of ICT was approved by the government of Indian in 1998. The National IT policy was approved with the suggestions for the states to guarantee and demonstrate the structure for information and communication technology. "The Rural ICT solutions are proposed in India through internet portals held on a delivery web server to offer access to the citizens through a cheap internet medium. The data stream between the delivery server and the other department is connected through Intranet/LAN connectivity with servers of those departments" (Srivastava, 2017). With the segregation of national IT policy, various state governments have set up or in the process of setup the state wide area networks (SWAN) to sustain the rural connectivity through the use of ICT.

Through the use of ICT, schemes like Mahatma Gandhi National rural Employment Guarantee Act (MGNREGA), National Rural Health Mission (NRHM) etc. at the State level providing outstanding services and saving time and money of the people as well as the government by confirming the socio–economic progress of rural India (Srivastava, 2017).

The e-governance projects in rural India thorough the use ICT try to ensure the government services to the citizen at their door steps. Following figure indicates the ICT infrastructure adopted by most of the rural applications.

Flow Chart of the Model of ICT application in the Rural projects in India



Flow Chart 1. Model of ICT application

The ICT projects in the rural areas in India are applying through the internet portals accommodated by a delivery web server to facilitate the access for the citizens through a cheap internet medium (Rama Rao T.P, 2004). There is an intranet or LAN (Local Area Network) connectivity among the departments. Sometimes, due to the non-computerization, transactions are manually done and later it is installed through the portal offices manually.

Besides these there are several technologies and agencies are involved in the delivery system. Following figure indicating the stages:

Table on Stages of Information Processing in Rural Applications Stage Connectivity Technology Agency (Rama Rao T.P, 2004)

Table 1. Stages of Information Processing in Rural Applications

Stage	Connectivity	Technology	Agency
1	Related Departments to Central Servicing Agency	Manual or WAN / Intranet / LAN of individual departments	Individual departments of central, state and district administration
2	Central Servicing Agency to Delivery Server (web server)	LAN with or without Intranet	Coordination committee offering the service
3	Deliver Server (web server) to Internet Service Provider (ISP)	Leased or Dedicated line / VSAT	Service deployment agency
4	Central Servicing Agency's ISP to Rural –ISP	ISP dedicated lines / BSNL / VSNL / Private Telecom	Internet Service Provider(s)
5	Rural - ISP to Rural Kiosks*	Dial up line / Wireless	Service Delivery Agents (Village Panchayats, Private Entrepreneurs)

It is seemed that there should be good coordination among the all agencies to ensure good and healthy rural e governance through the use of ICT applications. Besides all, there is an issue of power supply, without which not a single step can be forwarded in this project.

Technical Barriers of ICT in India

Even in India, local contents and local, regional languages are not able to apply in the programming (Rama Rao T.P, 2004). Hence it has not yet become people's friend. The cost of the computerization in the rural India is very high. Transportation cost is another additional cost on this program. Especially the maintenance cost is too high in the rural area. Even the technicians are showing reluctance to visit the rural area in India. Although, in rural e-governance system, several investors are trying to supply the low-cost hardwires and also try to ensure low cost software solutions. Though, this is not found enough to fulfill the demands of necessities of ICT projects at the grassroots' levels in India.

It is expected that most of the rural ICT applications are meant for socially and economically backward communities.

Therefore, the service transfer machineries should be friendly among these people. Therefore, 'kiosks' (stage 5 of the figure 3) must be located in the areas suitable to them to reach and use. The kiosk operators must try to interact the people well and should pleasantly deliver the services. There should be a hygienic environment in the service delivery offices in the villages.

Scope of PPP Mode, ICT and Rural India

The e-government projects are found to be useful with the public-private-partnership (PPP) mode, where different private agencies are involved for different tasks. Various agencies are involved from designing to delivery system of the application. This kind of mood of investment can bring the fastest implementation and also help in reducing the burden from the system. Finally, it will bring better value and position to the citizen in a state. Although there is security issue which have to be eyed. In these whole processes, all the important and valuable data will be in the hand of the private owner. So, there have to maintain a proper legal procedure while going to have a PPP mode of operation.

VI. CHALLENGES

Government of India is facing some basic challenges during the implementing the E-governance through ICT in rural area. Illiteracy is one the big problem in the rural area. People rarely know about the basic knowledge of computer in the villages. Another problem is the power-cuts issue especially in the villages in India. Seldomly the villages have the uninterrupted power supply in their locality. And besides these, many state governments are not having sufficient fund to install the computerization in the entire corner of their jurisdictions. Unfortunately, most of the technically experts/ professionals are reluctant to work in the rural area, which is a hazardous condition for implementing ICT in the rural areas in India.

VII. RECOMMENDATIONS

Government has to initiate programs to train the people specially living in the villages and make them effective to know the uses of ICT application. Government of India has to increase the number of the projects for the rural development through the use of ICT application. Programming should be more people's friendly without having complicacy.

Besides that, government also needs to train the office bearers sufficiently to handle the computerization process in their offices. There should be coordinating agency between the technology and citizen services and they must review the system time to time.

After all, government has to take step to popularize the E-Governance through the use of ICT application. Government has to install awareness camps, public meetings. Banners, advertisements etc. and should try to create an environment where people are spontaneously joining the program of E-Governance.

VIII. CONCLUSION

The Information and Communication Technologies (ICT) are a new dynamic to assure an efficient an effective system. Importantly, it is a solution to ensure a fast delivery government service at the doorstep of the people in every corner of the country. But to success, such application, there is a need of good coordination between the various departments, officials, regulatory agencies and most importantly people's enthusiasm to participate in it. Although ICT application is in pilot mode in India, still it is not applicable in the sectors. But results come in a positive way. From the above analysis, it has found that if the whole E-Government Projects through the use of ICT is supposed to be successful, then there is need of support from the private agencies. In this whole program, local NGOs and Panchayat bodies can also involve in different stages of the program for the successful implementation; i. e. -service delivery system etc.

ACKNOWLEDGMENT

I would like to thank my colleagues of the Department of Political Science of the University of Science and Technology, Meghalaya, India, who have extended their valuable help for the accomplishment of this paper.

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