

# Role Of Information And Communication Technology For Rural Development-A Study In Nilambur Of Malappuram District

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*Abstract: Rural development is a process that aims at improving the standard of living of the people living in rural areas. Information and Communication Technology (ICT) is one of the key driving forces, in the 21st century. ICT provided potentials for economic growth, effective governance and social empowerment. Information is critical to the social & economic activities that comprise the development process. Introduction of ICTs in rural India is changes in the whole process of rural sector by improving transparency, accountability and administrative efficiency of rural institutions, education system, and improving the efficiency and responsiveness. Advances in Information and Communication Technologies have completely changed the socio-political landscape of contemporary society. Development of new communication technologies and its ever-increasing availability and use by the public has completely transformed the pattern of social interaction, systems of governance and public policy making. The proposed study attempts to analyze the role of ICT in rural development.*

**Keywords:** Rural development, ICT,

## I. INTRODUCTION

Advances in Information and Communication Technologies have completely changed the socio-political landscape of contemporary society. Development of new communication technologies and its ever-increasing availability and use by the public has completely transformed the pattern of social interaction, systems of governance and public policy making. ICT is now exercising such a powerful, persuasive and pervasive influence on the life and lifestyle of individuals and communities that the socio-cultural fabric of the society is experiencing unprecedented and unforeseen challenges. Communication revolution has raised a series of socio-political, techno economic and moral-ethical questions, on the consequences

The ICT sector as a whole has emerged a strategically important sector determining social and economic change in developing countries. It is clear that ICT will grow rapidly, even though it is still an infant or nascent industry in the developing countries. Already, television and radio are ubiquitous communication technologies. In the last few years

there has been a significant surge in terms of access to telephony, the internet and web based technologies, in both urban and rural areas. Today ICTs are powerful tools for providing farmers with the knowledge they need, to put agricultural innovations and socio-economic opportunities to best use. They are generating new possibilities to best overcome the problems of rural poverty, inequality and environmental degradation.

Information and Communication Technology is the world's fastest growing economic activity. The Information and Communication Technology Industry has been found to be ideal for Kerala in terms of its potential to generate opportunities and employment with little pressure on land, environment and other resources. This is one of the most people-friendly and environment-friendly industries of modern times. In the context of developing countries, IT is seen as one of the most significant forces of modernization. Kerala has all the intrinsic advantages that can foster the growth of IT for social and economic development, including, advanced levels of literacy, education and healthcare, an excellent telecommunications network reaching all towns and villages,

educated women, availability of world class IT professionals and IT infrastructures. Government of Kerala acknowledges the critical importance of Information and Communication Technology as an instrument for the State's overall development and remains deeply committed to its use, both as a crucial engine of economic growth and as a tool for increasing productivity, speed and transparency in governance and improved quality of life for the common man.

Electronic governance is the application of information technology to the process of government functioning to bring about simple, moral, accountable, responsive and transparent governance.

## II. REVIEW OF LITERATURE

### INTRODUCTION

#### INTRODUCTION

Review presented below includes literature pertaining to social implications of Information and Communication Technology and application of Information and Communication Technology for Rural Development and related aspects.

*Indiresan* (1989)<sup>1</sup> conducted a study on the technological planning for rural development. The author discusses the four categories of technologies: they are craft technology; traditional machine technology; modern-electrically oriented-technology; and futuristic computer dominated technology. According to the author modern technology and futuristic computer dominated technology will rapidly replace the conventional production technologies but basically their value is as information processors.

*Boonalia* (1996)<sup>2</sup> in his article states that the need of rural community centers at the villages and the major functions of the rural community centers can be recognized as to provide scope for education, information and recreation to the rural masses. The centers will play a vital role in their social, cultural, physical, mental and economic development. The author hardly stresses that rural community centers with multi-dimensional activities will be the forum for building up an enlightened well informed, cultured and progressive society in the country.

*Upadhya* (1996)<sup>6</sup> done an enquiry about the role of information technology in community development. The process of community development involves decision makers, planners, and extension workers. The information obtained from block level information systems (BLIS) is highly useful.

*Gill* (1996)<sup>7</sup> suggest that information is the most recognized resource for socio economic, scientific and technological progress of mankind as a whole. During the recent years, increase in information has led to increase in the demands of the users. Libraries are the major information centers leading this information revolution. Due to prevailing financial and space crisis in almost all the Indian libraries, it is reasonable to think of promoting IT to meet out the challenges posed by increasing information needs and exploding information. The article discusses the real meaning of IT, its past and current developments and its impact in the social sphere through its information centers. The paper gives a brief description about the various library networks and their need.

*Neelameghan* (1998)<sup>8</sup> in the article, "Information Technology and development" suggested that the rural people has a three-fold purposes relating to information and communication, they are; to enable them become more productive and efficient in their economic activities; to enhance their capacity to disseminate the valuable native knowledge they possess; and to facilitate reliable village data collection and analysis needed for development planning.

*Chandel and Chouskey* (2001)<sup>1</sup> made a study on the role of information technology in rural development. The authors conducted a case study on the Panchayat Raj Institutions in Madhya Pradesh. The article deals with management information systems in rural set-up and the various tools and equipments necessary for setting up of information kiosks. The authors suggested that the panchayati raj institutions have a vital role in bringing awareness and disseminating information among rural people. Right information to be made available to the right person at the right time at low cost is possible only through the new information technology. Information technology is a device which is used to accelerate the process of the development and expected to bring maximum social advantage for the benefit of the society.

*Pillai* (2003) in the article "Information for development status Assessment of Grama Panchayaths" argues that the basic principles of the decentralized planning with peoples participation in Kerala is the optimum use of available local resources for the all round sustainable development of the grama panchayat as conceived and desired by the people of the panchayat. He suggested that the information and implementation of such development projects as necessary to meet the felt needs of the local people, expressed through the grama panchayat.

*Reddy* (2013)<sup>1</sup> made an attempt to identify the opportunities of information technology for governments. Electronic governance is the application of information technology to the process of Government functioning to bring about simple, moral, accountable, responsive and transparent governance. Transparency is made possible which enables participation of the people in development and it makes democracy meaningful.

## III. STATEMENT OF THE PROBLEM

Information and communication technology provide not only an opportunity to participate vigorously and effectively in a globalizing world, but also to use it as a major vehicle for all round socio-economic development of the country. Kerala is the first e-literate state in India Malappuram is also first e-literate state in India .

The present study 'ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR RURAL DEVELOPMENT - A STUDY IN NILAMBUR OF MALAPPURAM DISTRICT' Is conducted to ascertain the impact of ICT for the development of rural community and to find out, what extent the application of ICT will help for rural development programmes implemented in the study area.

#### IV. OBJECTIVES OF THE STUDY

The present study has been undertaken with the following objectives:

- ✓ To ascertain the impact of ICT for the development of rural Community.
- ✓ To identify the existing ICT applications in the study area.
- ✓ To observe the progress of information technology in the rural sector

#### V. SCOPE AND IMPORTANCE OF THE STUDY

Today, more than 80 low-income developing countries suffer from chronic food deficits and about 800 million people live in hunger. Rural people constitute the greater part of the population of developing countries and often lack access to basic needs such as water, food, education, health care, sanitation and security, leading to low life expectancy and high infant mortality. The challenge is therefore to assist farmers of developing countries to secure the means to overcome food insecurity and improve their quality of livelihoods. All of this requires that, farmers have access to relevant information and knowledge. Knowledge and information are essential for rural people to successfully respond to the opportunities and challenges of social, economic and technological changes. The content relevant to the demand in rural areas, could drastically improve the delivery of information extension services. Hence, ICTs are playing a key role in the economic life and well being of their community.

The present study intended to analyze the social application of Information and Communication Technology. The main technologies involved in ICT are computer technology as well as communication technology. In a state like Kerala where most of the people live in poverty and backwardness, the present situation and life style of the rural people should be changed; so that, it can be accessible even to the layman of the state. So this study mainly tries to find out the role of ICT in rural development in Nilambur thaluk of malappuram district.

#### VI. RESEARCH METHODOLOGY

The study was based on “role of information and communication technology for rural development. The data required for the study have been collected with the use of structured questionnaire by a direct survey self-administered questionnaire, a popular method of data collection. Primary data collected from sampling method using the convenience sampling of 300 members making use of questionnaire method.

#### VIII. ANALYSIS

##### A. AWARENESS REGARDING THE RURAL DEVELOPMENT PROGRAMMES

The concept of Rural Development aims to improve the quality of life of rural people, and to establish income-generating activities for rural people. The concept is reached to the public in the form of different types of Rural Development Programmes developed for the benefit of the rural community by the government of India. The selected persons from the rural areas of Chungathara panchayath are requested to reveal their awareness on the concept of Rural Development Programmes. The responses are depicted in the Table. 1

Awareness status	professionals	Students	House wife's	labours	Total
Aware	40 (53%)	30 (40%)	43 (57%)	30 (40%)	143 (47.66%)
Not aware	35 (47%)	45 (60%)	32 (43%)	45 (60%)	153 (52.33%)
Total	75	75	75	75	300

Source; Primary data

Table 1: Awareness Regarding the Rural Development Programmes

The Table. 1 indicates that all the professionals (53%) involved in the study are aware of the concept of Rural Development Programmes. The Table also reveals that 45 per cent of the Labours, 40 per cent of the students and 57 per cent of the housewives are aware of the concept of Rural Development Programmes in Kerala

The general analysis of the Table 5.1 shows that (52.33%) of the rural people under study are not aware of the concept of Rural Development Programmes available to them. Since the professionals are educated and housewives are also specific idea about various developmental activities taking place in the society, they have achieved the awareness on the concept of Rural Development too.

##### B. AWARENESS ON THE CONCEPT OF ICT

ICTs are a diverse set of technological tools and resources to create, disseminate, store, bring value-addition and manage information. The ICT sector consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware, software and services and electronic media, for example, the internet and electronic mail. It is one of the key driving forces in the 21st century. It transforms the way we live, learn, work and play. The awareness status of the rural people on ICT is given in the Table.2

Awareness status	Professionals	Students	Housewives	Labours	Total
Aware	75 (100 %)	70 (93 %)	34 (45 %)	22 (29%)	211 (67.%)
Not aware	-	5 (5 %)	41 (55 %)	53 (71 %)	89 (33%)
Total	75	75	75	75	300

Source: Primary data

Table 2: Awareness on the Concept of ICT

The table shows that the professionals and students have more chances to acquire more knowledge from their area of work than the housewives and Labours. So the categories are at different in levels of knowledge.

According to the Table 5.4 professionals (100%) and students (93%) have more aware about the concept of Information and Communication Technology among the rural community. The figure also reveals that most of the

housewives (55. %) and labours (71%) in rural Kerala are ignorant on the concept of ICT. The general analysis shows that 67 per cent of the rural people in Kerala are aware of the concept of Information and Communication Technology. Since Kerala is one and only full literate states in India, the people have a clear understanding of the developmental activities taking place in the state.

### C. UNDERSTANDING OF INFORMATION AND COMMUNICATION TECHNOLOGY

Information and Communication Technology is a recently emerged concept and it can be applied to all works of human life, the people should have a clear idea about the concept.

Concepts	Professionals	Students	Housewives	Labours	Total
Computerization	20 (27%)	15 (20%)	34 (45.33%)	15 (20%)	84 (28%)
Communication devices	13 (18%)	15 (20%)	19 (25.33%)	22 (29.33%)	49 (23%)
Technological growth	34 (45%)	38 (50.66%)	14 (8.13%)	34 (45.33%)	120 (40%)
Storage devices	8 (10.66%)	7 (9.33%)	8 (10.66%)	4 (5.33%)	27 (9%)
Total	75	75	75	75	300

Source: Primary data

Table 3: Understanding of Information and Communication Technology

According to the Table .3 a large portion (40%) of the rural people perceived that ICT is the instrument, which will lead the society to the state of extreme advancement through technological development. It includes 45 per cent of professionals, 51 per cent of students, 20 per cent of housewives and 45 per cent of Labours. The Table also reveals that 28 per cent of people understand that it is simply the automation or computerization of manual work already done and works to be completed. There are only 23per cent of the rural people in Kerala think that ICT is the process of communication technology. The rural people in Kerala do not have a concrete idea about the concept of Information and Communication Technology

### D. BENEFITS ATTAINED THROUGH THE APPLICATION OF ICT FOR RURAL DEVELOPMENT

Information and Communication technology is a device, which is used to accelerate the process of development and is expected to bring maximum social advantage, for the benefit of the society. ICT can be applied in the different areas of rural development.

Benefits	Professionals	Students	Housewives	Labours	Total
Marketing	10 (13.3%)	-	8 (10.66%)	10 (13.3%)	28 (9.33%)
Health care	3 (5%)	-	-	2 (5%)	5 (1.66%)
Communication facilities	20 (26.6%)	50 (66.6%)	12 (16%)	15 (20%)	97 (32.33%)
Agriculture	2 (5%)	-	-	2 (2.66%)	4 (1.3%)
Akshaya	10 (13.3%)	10 (13.3%)	20 (26.6%)	4 (5.33%)	44 (14.6%)
Banking facility	25 (33.3%)	5 (6.66%)	9 (12%)	15 (20%)	54 (18%)
Entertainments	5 (6.66%)	10 (13.3%)	2 (5%)	4 (5.33%)	21 (7%)
None of these	-	-	24 (32%)	23 (30.6%)	47 (15.66%)
Total	75	75	75	75	300

Source: Primary data

Table 5.4: Benefits attained through the Application of ICT for Rural Development

It is worthwhile to note that the rural people involved in the study are largely (32.3%) using the communication facilities offered by Information and Communication Technology. It is the duty of government to provide, encourage and facilitate marketing of the products. The self government institutions can provide and facilitate trade opportunities among the beneficiary groups by properly identifying local needs and resources available at the local level. However a small portion of the respondents are availing the agriculture facilities and health care facilities in the part of Information and Communication Technology.

### E. PURPOSE OF VISITING AKSHAYA E-KENDRAS

The twin objectives of Akshaya are (1) to provide basic e-literacy and (2) to develop appropriate IT infrastructure so as to leverage e-literacy and IT infrastructure for e-governance in the state Kerala. Akshaya project is launched with the objective of providing computer literacy to at least one person in every family. Besides that Akshaya providing lot of services including internet in different areas like E-governance, E-krishi, E-learning, E-transaction, etc. The rural people under study are requested to specify their purpose of visiting Akshaya centers and the details are given in the Table .5

Aims	Professionals	Students	Housewives	Labours	Total
Not visiting	-	3 (4%)	30 (40%)	28 (37.3%)	61 (20.33%)
Computer training	19 (25.33%)	25 (18.7%)	19 (25.3%)	4 (5.33%)	67 (22.33%)
Browsing	8 (10.66%)	20 (26.6%)	-	-	28 (9.33%)
Entertainment	-	10 (13.3%)	-	-	10 (3.33%)
Online purposes	18 (24%)	14 (18.6%)	25 (33.3%)	2 (2.66%)	59 (19.66%)
Communication	5 (6.66%)	2 (2.6%)	-	26 (34.6%)	33 (11%)
e- pay	25 (18.75%)	1 (1.33%)	1 (1.33%)	15 (20%)	42 (14%)
Total	75	75	75	75	300

Source: Primary data

Table 5: Purpose of Visiting Akshaya E-Kendras

It can be clear from the table that substantial portion (22.33%) of the rural people under study are visiting Akshaya kendras for acquiring computer training. There are small portion of the (11%) people visiting for communication purpose (11%) information in their area of working. Besides these the rural people are visiting Akshaya kendras for payment of government bills, sending online applications e.g. Kerala Public Service Commission, searching results etc.

### F. DEVELOPMENT OF VILLAGE BY EFFECTIVE APPLICATION OF ICT

ICT is a Social Movement involving empowering the Rural Womens, Sudents, Farmers and Professionals for the development of the state. As part of this it will undertake several Social Activities through it's Rural Development Programs. The following table shows the development village

is possible through the effective application of Information Communication Technologies.

SL.No	Status	No.of Members	Percentage (%)
1	Yes	259	86.33
2	No	41	13.33
<b>TOTAL</b>		<b>300</b>	<b>100</b>

Source: Primary data

Table 6: Development Of Village By Effective Application Of ICT

The above table reveals that respondent opinion that the development of village is possible through the effective application of (ICT). 13.33 percent of respondents are not aware of the Rural development programs through ICT.

Among the Indian states, Kerala has several 'firsts' to its credits. Latest technological developments and application of ICT in various fields could be counted among its recent credentials. The empowerment of the rural population is only possible through the empowerment of local governments.

### VIII. FINDINGS

- ✓ The study shows that a half portion of the rural people are aware of the Rural Development programmes available for them. The different categories of rural people are significantly differing on awareness, regarding the rural development programmes available in study area. The people who get the benefit of the Rural Development Programme, majority of the rural people have to enjoy the benefits of such programmes
- ✓ According to the study that a half portion of respondents in rural Kerala are aware of the concept of ICT.
- ✓ It is worthwhile to note that the rural people involved in the study using the communication facilities offered by Information and Communication Technology. It is the duty of government to provide, encourage and facilitate marketing of the products. Since the society is much IT oriented, it is essential to have fundamental computer knowledge to rural people for better life. It is evident from the study that majority of the rural people under study are attained the basic computer knowledge.
- ✓ Large portion of the respondents of the rural people under study are visiting Akshaya kendras for acquiring computer training.
- ✓ I C T is a Social Movement involving empowering the Rural Womens, Students, Farmers and Professionals for the development of the state. As part of this it will undertake several Social Activities through its Rural Development Programs

### IX. SUGGESTIONS

The study has arrived some problems of ICT and offering the following suggestions for improving the activities of selected sectors of Rural Development in Kerala especially in the Nilambur thaluk through the application of ICT on the basis of the present study.

- ✓ To provide computer training to all peoples in rural area.

- ✓ To provide less costly and fast full communication system to rural area.
- ✓ Planning for effective use of ICTs in education necessitates understanding the potential of technology to meet different educational objectives.
- ✓ Government should take more action to make akshayas more hygienic and provide facilities to improving self employment through ICT
- ✓ Started farmers school, farmers business training centers, agrifarmers training centers etc
- ✓ Farmers' Discussion Groups have been organized at the village level. Such groups are encouraged to meet periodically to debate on the burning issues.
- ✓ Effective mechanisms have to be introduced to improve access to information to increase transparency of government actions
- ✓ The various components representing Rural Development are E-Governance, Agriculture, Health, Women empowerment, Youth welfare and Education. Govt. give equal importance to all sectors

### VIII. CONCLUSION

ICT have made the greatest contributions in improving the standard of living in the rural area. The scope for further advancement in rural development in the state is quite vast, in view of the really appreciable overall achievements of the state in adopting and implementing various ICT initiatives, despite the low percapita income and considerable financial constraints that it faces. The achievements in e-governance front can be effectively translated to those in rural developments through suitable linkages and policy initiatives for utilizing the "e-infrastructure". In view of the quite favorable socio-economic environment of the state, particularly the abundant amount of technically qualified and skilled human resources and high level of social equity, the state has got excellent potential for bringing in ICT-led rural development in a balanced and equitable manner, and hence to achieve rapid prosperity digital divide. Government should make more initiative to increase the use of technology and educate people in order to use ICT effectively and efficiently.

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