Role of Mobile Phones (ICT) For Rural Area Development in India

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Abstract – Information and Communication Technologies (ICTs) are changing each circle of our lives. Because of huge progress in internet technologies, ICT bigly affects rural areas and rural lives. Particularly in agricultural field there is huge part of ICT in rural areas. It is additionally expected that the ICT drove expansion frameworks will go about as a key operator for farmers to get to data and share learning. Consequently, recharged excitement to utilize new ICTs for agricultural advisory administrations prompted to mushrooming of e-activity pilots in India. The trailblazers are testing inventive ICT activities exclusively for agricultural information and knowledge delivery. Not at all like different areas, is agriculture a perplexing division where a large portion of the ICT activities may not work well. The time has come to push ahead in coordinating ICTs and Information and Communication Management (ICM) in agricultural extension. One of the primary purposes behind the biased dispersion of financial picks up between the urban and the rural population is the crevice in get to information. ICT can connect this hole and subsequently prompt to diminishment in the level of destitution. Farmers can access knowledge to enhance their generation and even improve cost for their produce using assortment of ICT frameworks. In the present paper the creators made an efficient audit of the part which ICT can play in the development of rural areas in India.

Keywords— E-education, E-governance, ICT, Rural Development, Agricultural Information Mobile Phone, India

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INTRODUCTION

Information and Communication Technologies (ICTs) have changed lives crosswise over India. As per the statistics of 2011, 68.84% of the population of India is rural while 31.16% is urban. These figures obviously show that India still inhales in villages. Be that as it may, even after more than sixty seven years of autonomy, lack of education, neediness and backwardness in all terms still plagues rural India. Information and Communication technologies have turned out to be basic to the advance of rural India. They have turned into a fundamental part in the data stream for catalyzing the improvement endeavors in country India. ICTs offer a few systems to accomplish economical rural development. ICTs have been instrumental in enabling the provincial India with advances which help us to achieve our objectives of feasible improvement. Understanding the significance of ICTs in rural development in India, a few government ventures have been executed to accomplish general access to ICTs. These tasks chiefly concentrate on connecting the advanced separation between the urban and rural areas of India. The desperation to extension this gap for the most part originates from the way that in India, the rural areas generally fall behind the urban areas, with regards to instruction, wellbeing and framework (Bhatnagar, 2004). This prompts to disparity of administrations and open doors for the rural population which prevents them from adding to the advancement of the nation. This sort of provincial confinement can adversely impact growth and thusly influence the sustainable development of the nation. ICTs can defeat the different requirements in foundation. Using ICTs, individuals in rural areas can associate effectively with the nearby, territorial and national economy. They can make utilization of the saving money offices and furthermore get to the different openings for work which would some way or another be past their span. ICTs can make mindfulness among the rural public in regards to new technologies in agriculture which would help them to add to the GDP of the nation. The different ICTs can spread instruction among the rural masses and help them to associate effectively with their urban companions. Along these lines spanning

the computerized partition helps in crossing over the infrastructural hole as well as to convey the rural population to the front line. The advancement scene has been changed by the blast of ICT, particularly the mobile phone technology (Satyanarayana, 2004). This technology has enhanced the life of the rural population by incorporating the once disengaged individuals into the economies and governmental issues. The blast in ICTs has been observed to be connected to the economic development of a nation. As per a review, in light of information from 113 nations more than 20 years, 1% expansion in the ICT brought about the expansion of 0.03% in the GDP. For versatile systems, the relationship was more noticeable with 1% development in mobile networks prompting to an expansion of 5% in the per-capita GDP. ICTs have additionally been found to contrarily affect the level of neediness in a nation. Considers have observed that more inescapable is the utilization of ICTs inside a populace, lower is the destitution rate. A portion of the more customary types of ICT, for example, radio and TVs have had a more noticeable effect than the new types of ICT. Because of their convenience, simple availability and recognition to the ignorant populace, these types of ICT will stay essential to rural Indian development.

The mobile phone is more vital than alternate types of ICT with regards to rural development in India. This is a result of two reasons: firstly, they are less demanding to access for the rural poor than alternate types of ICTs which have a tendency to be costly and require framework. In the event that we think about some current measurements, in 2012, in India, there were 929.37 million mobile phone clients instead of 31.53 million landlines. Furthermore, the utilization of mobile phones increases the connection between the clients. From being a restricted channel for data, the ICTs have advanced to making the landmass' biggest exchange channel empowering clients to purchase, impart, associate, sort out and broadcast themselves.

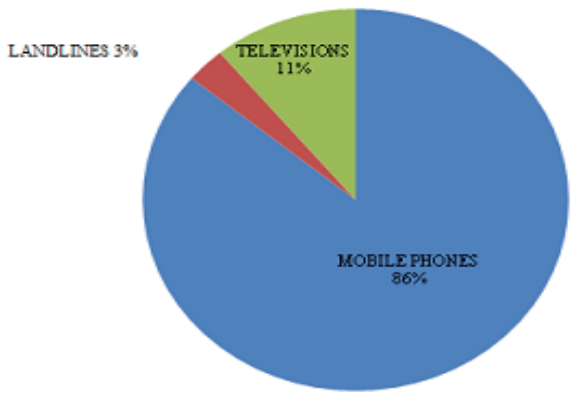


Figure 1: Comparison with other media

Customarily, the general development has been viewed as the consequence of advancement in different segments, for example, agribusiness, training, wellbeing, administration and managing an account. In any case, over the previous decade, the utilization of ICTs has been more normal and in each field, specialists are utilizing ICTs to address shared challenges of get to, quality and cost. Much of the time, their advancements have relevance crosswise over several sectors: The utilization of PCs and content messaging services has empowered the gathering of high caliber and minimal effort information on rural populations, which thus allows better administration arrangements. Data with respect to wellbeing, cultivating practices and climate are given by gifted people working in the call centers.

ROLE OF ICT IN AGRICULTURE:

Information and communication have dependably been indispensable to individuals who have grown crops, raised animals and got angle. They have looked for data from each other in regards to the best planting system on soak inclines, purchasing of enhanced seeds or bolsters, the most noteworthy cost being paid in the market and the one paying it et cetera. The responses to such inquiries are difficult to find for the farmers. They may have planted some product for a considerable length of time yet because of the changing climate examples and soil conditions, pestilences of nuisances go back and forth. Refreshed data can help the farmers to adapt to as well as also benefit from these progressions. Despite the fact that the Green Revolution prompted to expanded profitability of sustenance harvests, there is still the need of another insurgency which will bring new costs for consumers, add to —smartll agriculture and boost the farmers to build their productivity (Bhoomi, 2004. Gyandoot, 2004. Sustainable Access in Rural India.2004). The hunt has been long on the powerful answers for address the long haul and here and now challenges in agriculture and to answer the inconceivable number of inquiries which are confronted by the farmers. ICTs have raised as the potential answer for meet the previously mentioned challenges. Due to their openness, moderateness and adaptability, they have discovered their utilization even with the rural population. New little gadgets, (for example, multifunctional mobile phones and nanotechnology for food safety), framework, (for example, mobile telecommunication networks and cloud computing facilities) and especially applications, (for example, those that transfer money and track a thing traveling through a worldwide supply chain) have multiplied. A large number of the inquiries asked by farmers can now be addressed effortlessly and efficiently and with greater accuracy.

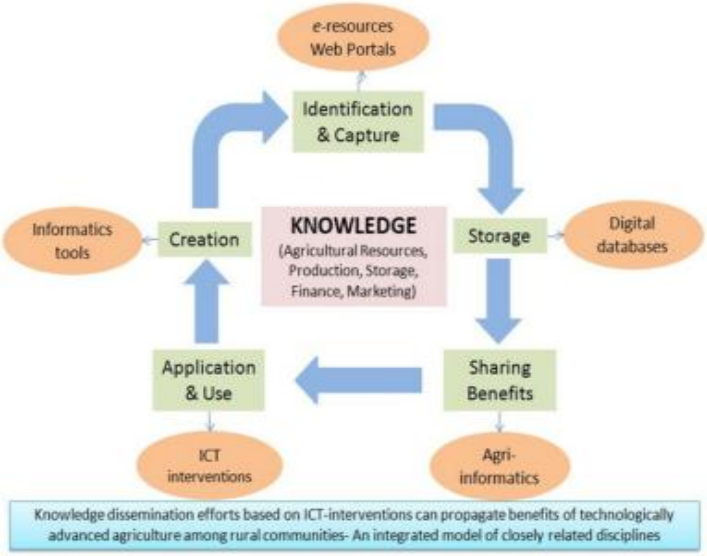


Figure 2: ICT in Agriculture

In plan of action constrained areas, satellites or remote sensors can be utilized to accumulate temperature information, web can be utilized to store a lot of information, and mobile phones can be utilized to disperse temperature information to farmers efficiently. All these avoid trim loses and relieve impacts from common difficulties. Soil data can be gathered and dispersed by an assortment of ICTs. Some more refined and concentrated applications, for example, programming utilized for store network or financial management are additionally getting to be distinctly well known among the rural people. These are just a portion of the cases of the ways ICTs can be utilized to improve the agriculture in India. Hundreds of agriculture particular are presently developing and are indicating incredible guarantee for smallholders.

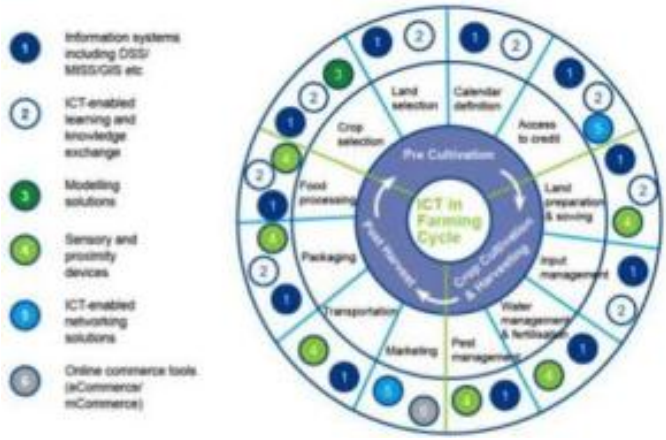


Figure 3: Integration of ICT into Agriculture

ROLE OF ICT IN E-GOVERNENCE:

With the ICTs plaguing each circle of life, they have gotten to be omnipresent. Political, Cultural, Socio-economic, Developmental and Behavioral decisions today, lays on the capacity to get to, accumulate, break down and use data and knowledge. ICT is the channel that transmits information and knowledge to individual to broaden their decisions for economic and social empowerment (Batchelor Scott, 2005) Legislature of India is having an aggressive target of changing the subject government communication at all levels to the electronic mode (E-Governance) by 2020. Majority of the Indians live in villages or rural areas. Henceforth, to guarantee a sustainable growth and development of these rural people, the Government of India has presented the National E-administration Plan (NeGp) which tries to establish the framework with different activities, beginning from the grass-root level, and giving driving force to long haul e-administration inside the nation. In this light, the significance of ICTs has been appeared in various rural e-administration applications executed in the current years (CEG, IIMA, 2002). To be sure, a portion of the plans presented in rural India have enhanced the legislature services immensely. India lives in villages, and for the development of India, it is vital that the rural development be reliable and constant. In a large portion of the remote villages, a few taxpayer driven organizations are not accessible and local people need to hurry to adjacent regions to complete their work. E-administration applications can give online services which can lessen the cost of, the residents as well as of the legislature. Rustic e-administration applications can sharpen the general population with respect to the possible benefits and services of the legislature. The accomplishment of e-administration in rural India is reflected by the way that the rural citizens are presently utilizing the online services (CEG, IIMA, 2002). A venture like E-gram panchayat has made correspondence simple as now, government authorities can know about correct circumstance of villages coming into their work region very easily.

E-administration services through ICT allude to value-based administrations that include neighborhood, state or national government. ICTs acts in accelerating the stream of data and information amongst government and nationals and changing the path in which governments and subjects connect. We require a fruitful ICT application in E-Governance which gives a one stop answer for the rural population. In the current past, different provincial E-Governance applications have conveyed to the cutting edge, the significance of ICTs in the domain of rural development. A few e-administration applications have attempted to enhance the achieve, upgrade the base, limit

the preparing costs, increment straightforwardness and limit the process durations. To encourage the simple access of the state and region organization administrations to the rural people, many states have actualized the State Wide Area Networks (SWAN). The government is progressively utilizing different types of ICT to develop the span of its administrations to such areas which are advantageous to the people. The point of such rural ICT applications is to convey to the village door steps, administrations of focal organizations, for example, area organization, co-agent union and state and local government offices. Such applications offer improved connectivity and preparing answers for the rural people (Kurukshetra, 2012. Charru Malhotra, *et. al.,* 2006. Prof. T.P. Rama Rao, 2004). A substantial number of rural e-administration applications intend to offer simple access to native administrations and improve processing of government-to-citizen transactions.

Figure 4: E-governance and Empowerment

ICT AND LIVELIHOOD ASSETS:

ICT has an impact on livelihood assets in a number of ways depending on the local context in which they are introduced. They impact on livelihood in following ways:

i. **HUMAN CAPITAL:** Improved access to education and training through distance learning Programs and educational tools for wide range of formats. The impact of increasing information flow, human capital needed for translating information into different languages and appropriate formats for the intended users and their local culture.

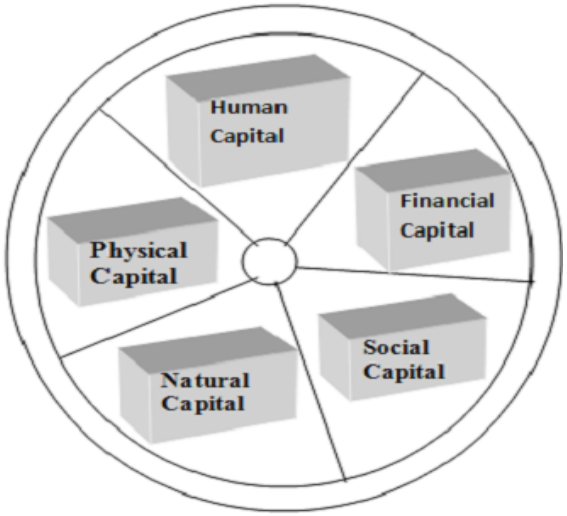


Figure 5: Livelihood assets

ii. **NATURAL CAPITAL:** Uses of ICT in rural area can managed all natural resource records such as land, cool etc. Communication channels can be enhanced with appropriate authorities, landowners, government ministries and local government officials. So that, all can communicate for take appropriate decision about the natural resources.

iii. **FINANCIAL CAPITAL:** Support and strengthening of the local financial institutions including micro-credit organizations to improve information provision on services and facilities available such as loans and savings schemes. By using ICT we can establish banking services in rural areas. So that, all the people can takes loans, save money for growth purposes.

iv. **SOCIAL CAPITAL:** Improved 'networking' both at the community level with existing networks and potentially amongst a much wider community. The ability to build new social networks at a regional and national level can help to bring benefits to existing networks and institutions at a local level such as CBOs, FOs etc. The reduction in the cost and time taken to pursue social networking goals can also have a positive impact at a household level with family members spending less time away and less money on transport. Expanded social networks may also result in increased opportunities for employment both locally and away.

v. **PHYSICAL CAPITAL:** communication channel establish by ICT are used for access to the

markets and market information helps to improve choices for the sale of goods on local markets or global market according to enhanced information on prices, comparative supply and demand for products.

COMMUNICATION MEDIA: For the connectivity of entire world to the rural areas, a communication media is required as shown in figure 6. Now a day's internet acts as a good communication media.

Telephonic communication media: This is one of the best communication media used in the communication between the service provider and the peoples. Through this communication media two people are interacted directly with each other. It is the oldest media of communication. Uses of telephonic media are.

1. **Telephonic and Transport:** Mobile phones are very useful for the arrangement of travels and transports for transferring goods to market place. This reduces traveling time and provides higher productive time.

2. **Telephonic and Market Information for Agricultural Produce:** Mobile phones greatly improve the access of information about the market. So Mobile phones are also provides great help when making decisions for the best time to sell the crops. It also cuts off the middleman between rural farmer and actual buyer. So that, problem like getting chatted by middleman is completely removed.

3. **Mobile Phones and Emergencies:** Mobile phones can be used to seek for help during urgent situations or get support during emergencies. For example, some villagers had doctors' and nurses' phone numbers that were being used to seek for medical consultation.

4. **Wireless communication media:** Now a day's internet is a good communication media though which we can connect to the whole world. Wireless communication is the cheapest and most secure media of communication. By the use of wireless devices we can communicate with the network .we get the knowledge about all the activities which we want to perform.

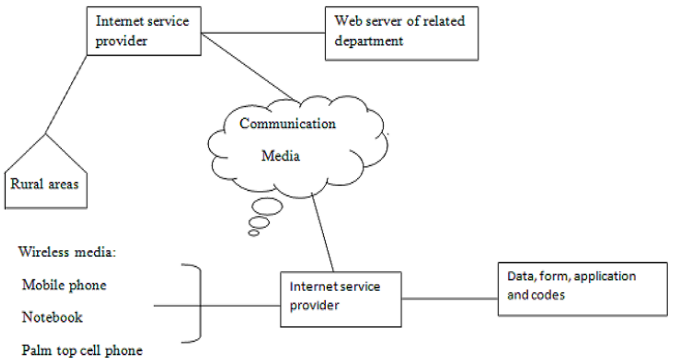


Figure 6: Communication Media

5. Radio communication: Previously known as "Radio Farm Forum" it was one of the earliest efforts in the use of radio for rural development. In February 1956 experiment was carried out for five districts of Maharashtra by All India Radio (AIR). So that people in rural areas listen to radio broadcasts and gain various type of profit like getting knowledge about market, country agriculturists and non-agriculturists, village leaders and others.

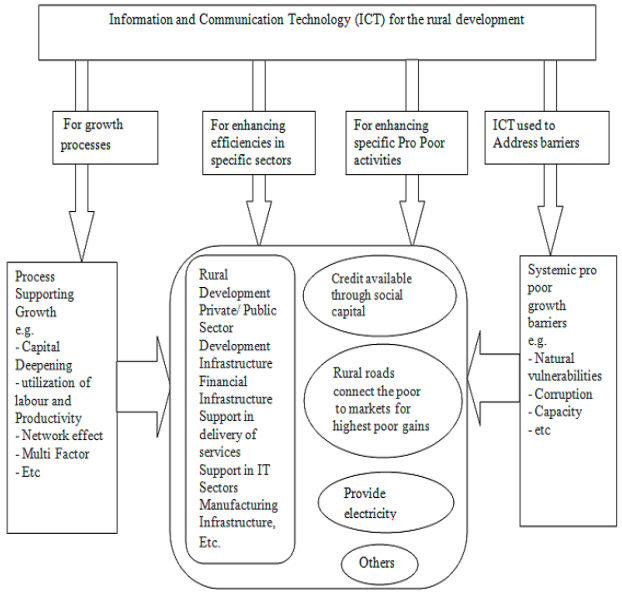


Figure 7- ICT as a key for rural development

6. **Communication Media for Household Income:** One of the best assets for income generation for the rural people is the communication media. If communication media is established in the rural area then residents of rural area can do communication business. Example household of rural area earn money through selling mobile phone related goods and services such as

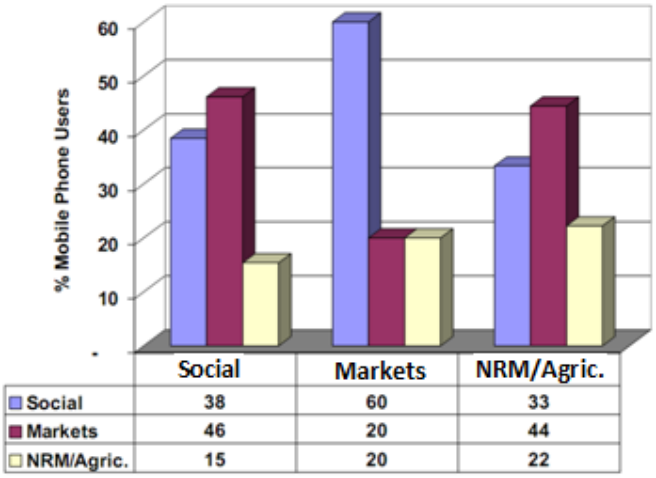
recharge voucher. Mobile phones can provide both direct (selling mobile phone services) and indirect income (monetary and time savings)

METHODOLOGY:

Mobile phones were disseminated to the rural communities in India. Orderly activity research and process documentation were utilized as a part of this review to screen the utilization of various information and communication technologies. The methodologies encouraged communication and information flow between farmer institutions at various levels, (farmer groups, India, and district levels), amongst farmer institutions and the telecentres and between data sources and the telecentres or information hubs. Data needs evaluation convention was utilized to distinguish farmers 'information needs and tried with farmer groups in India. The convention was then used to gather data needs on agro-undertaking, agriculture, NRM and markets. Monitoring and assessment process was utilized to analyze the use of mobile phones through village phone usage following structures. Three data delivery methods were utilized in the review region including paper based innovation (handouts, leaflet, and blurbs), phone and radio. Every strategy had its potential and challenges in conveying the information to the communities. The extent of this paper is to examine how mobile phone was utilized to upgrade access of data to rural farming communities of India.

RESULT & DISCUSSION:

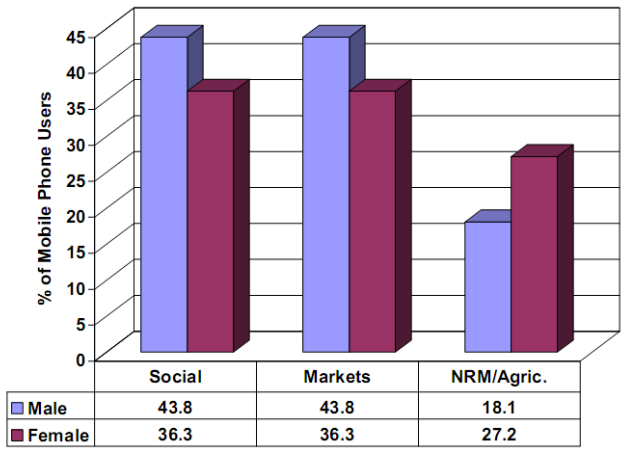
The results of the phone tracking in Indian demonstrated that the general phone usage was as follows Social (48%) Markets (33%) and NRM/Agric (19%) Higher use at Social is ascribed to shabby rates per requiring the venture telephone when contrasted with different payphones in the India. The low use in Social is credited to network problem for MTN phones, which rendered the phone to be unusable for a large portion of the circumstances. In India the examination demonstrated that by and large, around 7 individuals utilized the phone consistently. Be that as it may, recurrence of utilization heightened amid planting and gathering time. The farmers in India reported a exceptionally astounding convenience of the phone when there was a flare-up of foot and mouth sickness whereby a couple farmers raised worry to the group based facilitator who then called the area veterinary officer to vaccinate all animals in the India.



	Social	Markets	NRM/Agric.
Social	38	60	33
Markets	46	20	44
NRM/Agric.	15	20	22

Figure 8: Purpose of Mobile Phone in India

The general analysis of the motivation behind utilizing the phone showed that ladies utilized the telephone to ask for information on NRM and agriculture more than men across the Indian rural area, while more men used phones for individual and scan for market information (Figure9). This is credited to social set up in most customary rural area in India whereby women are included much in agricultural productivity however don't have command to showcase the deliver. Men as head of family units are more dependable in advertising of agricultural produce, for the most part the customary money crops. In the other hand women also are included underway and marketing of a few harvests like vegetables and local fruits.



	Social	Markets	NRM/Agric.
Male	43.8	43.8	18.1
Female	36.3	36.3	27.2

Figure 9: Purpose of Mobile Phone Usage by Gender

CONCLUSION AND FUTURE SCOPE:

Information and Communication technologies are changing all human activities. ICT is a powerful and productive

system which can quicken financial and social advancement in rural areas. To engage the rural communities with a maintainable approach, ICTs have been a standout amongst the best instruments. The accompanying table gives a superior understanding into this reality:

Strengthening rural governance: With the presentation of ICTs in rural India, there has been a major change in rural governance. It has enhanced straightforwardness, responsibility and authoritative proficiency of rural institutions. This has prompted to not just a superior investment of the rural people in the basic leadership handle additionally to a change in the effectiveness and responsiveness of the rural service conveyance. It has encouraged a fast, straightforward, responsible, proficient and powerful communication between the rural citizens. As an outcome, it has advanced a superior organization as well as spared time and exchange expenses of government operations.

Encouraging social transformations: For any sort of developmental process, access to data is of most extreme significance. With the growth in ICT, the stream of information and knowledge beyond the fringe of financial and societal position has gotten a stimulus. In this specific circumstance, ICTs are currently generally perceived as a basic instrument to handle advancement issues in any creating nation which at last prompts to social transformation.

Ensuring a better-quality of life: The application of ICTs can ease the expectations for everyday comforts of individuals in remote and rural areas by giving important commercial, social and educational benefits ICTs can fortify the business open doors for rural people by growing the utilization of taxpayer supported organizations ICT can guarantee a superior personal satisfaction for the rural poor with an enhanced access to markets, health and education. This thusly will push rural India towards economic development, work creation and neediness lightening

Strengthening the data base of rural communities: The queries generated by the nearby needs of the rural people can be fulfilled utilizing the ICTs Moreover, support to neighborhood administration can likewise be given ICTs can illuminate the rural people with respect to their rights, qualifications and the accessibility of different government schemes

REFERENCES:

Batchelor Scott (2005). Good Practice Paper on ICTs for Economic Growth and Poverty Reduction – © OECD.

Bhatnagar S.C. (2004). E-Government: From Vision to Implementation – A Practical Guide with Case Studies‖, SAGE Publications Pvt. Ltd., New Delhi, 2004

Bhoomi (2004). Computerizing Land records, http://www.revdept-01.kar.nic.in/Bhoomi/Home.htm , http://www.revdept- 01.kar.nic.in/Bhoomi/Faq.htm

CEG, IIMA (2002). An Evaluation of Gyandoot‖, http://www1.worldbank.org/publicsector/bnpp/Gyandoot.PDF , World Bank, 2002

CEG, IIMA (2002). Computerized Interstate Check Posts of Gujarat State, India, A Cost Benefit Evaluation Study‖, http://www1.worldbank.org/publicsector/bnpp/Gujarat.PDF , World Bank, 2002

Charru Malhotra, V. M. Chariar, L.K. Das, and P. V. Ilavarasan (2006). ICT for Rural Development: An Inclusive Framework for eGovernance (2006) , Indian Institute of Technology Delhi, New-Delhi, India.

Gyandoot (2004). The Purveyor of Knowledge, http:// gyandoot.nic.in

Kurukshetra (2012). Ministry of Rural Development, Volume 60, No. 3, January 2012.

Prof. T.P. Rama Rao (2004). Center for Electronic Governance, ICT and e-Governance for Rural Development, Institute of Rural Management, Anand, Gujarat, December, 2004.

Richa Kumar, Jhunjhunwala Ashok (2002). Taking Internet to Village: A case study of Project at Madurai Region‖, United Nations Centre for Regional Development, 2002, http://edevelopment.media.mit.edu/SARI/papers/uncrd_report_7.8.0 21.pdf

Satyanarayana J. (2004). E-Government.. The Science of the Possible‖, Prentice Hall of India Pvt. Ltd., New Delhi, 2004.

Sustainable Access in Rural India (2004). http://www.tenet.res.in/rural/sari.html

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