



## ICT enabled Technologies – issues in implementation (especially in perspective of Uttarakhand Rural Areas)

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**Abstract:** Information Communication & Technology makes the entire world a Global Village. The high speed connectivity, communication and technology are turn out to be a magic wand for the human progress and prosperity. But it looks so that this progress is confined with the virtual villages like metros and cities. The semi urban and villages looks far behind from the actuality i.e. implementation of ICT. This Paper is not a critic on the Government efforts. It is merely a survey report to put a thought on the efforts inadequacy, unable to reach up to grass root level. The current study will provide a microscopic view of the ground reality of villages especially in Hardwar district and show reasons why implementation of ICT is not effective over there. The probable solution of implementation of ICT is also worked out in the end.

**Keywords:** Villages development; ICT; challenges; solution of ICT

**Introduction:** Max Muller rightly quoted "If I were asked under what sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life, and has found solutions, I should point to India". The Glorious India resides in villages. It is not the count of metros Mumbai, Chennai, Kolkata or New Delhi makes the difference. It doesn't make the numbers of IIT's, IIM's or engineering and medical hubs. The real India exists in the unity and strength of millions of villagers across the nation. Many of our freedom fighters and martyr's lay down their life, Just for having a "Purna Swaraj" where every villager with a dream, a vision and an all round prosperity.

Gandhiji rightly said, "An all-round village service-man [samagra gramsevak] has to know everybody living in the village and render them such service as he can" (Gandhi, 1940). One can ask how a gramsevak may have the Sanjay (Mahabharata) vision- knowing every activity in and around village and globe. The continuous innovations and developments in the field of ICT along with Governments sincere efforts are making way for a common man to understand and incorporate ICT in daily life.

Information, Communication and Technology (ICT) are the three basic players of world innovation, creativity and completeness. Steve Ballmer, CEO of Microsoft Incorporation had a view, "ICT empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential".

### ICT – a boon for mankind:

Information, Communication and Technology plays a pivot role in today's day to day activity. Google Co-founder Sergey Brin said, "Some say Google is God. Others say Google is Satan." That is also true with ICT. The merits and demerits of ICT is the debate for the laureates, we herewith look out the positive impact of ICT in common man living.

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The major benefits of ICT:



Information of around the world at your fingertips. (computers, internet, Dish TV)

Explore the world, sky and water on a click. (Google earth, water, satellites)

The life is more connected with nears and dears through high end communication. (mobile, email, internet, high end telephony)

Technology is making life cosy, comfortable and with ease. (washing machine, freeze, A.C., sophisticated cars, bikes)

Day to day activities are based on ICT like banking, medical, travelling, cooking, farming, business etc. (ATM, CT-Scan, Open heart surgery, Air – train ticketing, Solar – electric cooking equipments, agro-farming, e-business, m-business.)

e-business, e-entrepreneurship, e-governance, e-chaupal, e-education and many E's are making in our life.

The ICT merit list is endless and it is a part and parcel of metropolitans and city livelihood. Now, one has to look that how ICT is brought changes in the rural area's especially remote villages, urban areas.

A Snapshot of Villages and soft appearance of ICT in villager's daily life:

The India had 638,365 villages. A majority 74% of population lies in village itself (Indian census 2001). The villager as a soul of villages feels proud and often refers while talking about "our village". Supremacy of the Indian Villagers is that they share most of the common village facilities like village pond, schools, sitting places under large shaded trees, temples and shrines, cremation grounds and many more.

The fellow villagers also share knowledge of their respective origin and also each other's secrets. The Interdependency in the village life provides a sense of unity among residents of a village.

"You cannot build nonviolence on a factory civilization, but it can be built on self-contained villages." The Villagers are also becoming self contained in last 6 decades. The villager's life style has been changed apparently; the new modes and mediums of ICT are becoming part of their livelihood.



The TV revolution has replaced the old fashioned Radio's. One can feel Dish-TV is also a part in some houses.

The mobile revolution is an integrated part of villagers. The daily wages, rickshaw pullers, farmers, school and college going boys and girls, mostly equipped with a mobile.

The gas, stoves may be seen in semi urban and villages but still the "Chula" is a major part.

The Telephony, Telegram, Post office and schools are having some traces of new waves of ICT.

#### **Government's Effort in implementing ICT at nation-wide level:**

Government efforts in bringing ICT through NIC projects, e-chapels, Kiosks are seen in some villages.

E-governance implementation. (Out of the 27 Mission Mode Projects, under the National e-Governance Plan (Neap), 14 MMPs have already started delivery of services while the remaining 13 MMPs are expected to begin services from 2014)[6].

The most effective states implementing e-governance are West Bengal, Tamilnadu, Maharastra, Utrakhand, Uttrarpradesh, Gujarat and Punjab.)

The Integrated MMPs like Aadhar (unique identification number), e-biz, e-courts, e-procurement, India Portal, CSC, National Service Delivery Gateway (NSDG), and EDI for e-trade are taking effective shapes.

GIS utilization in maintaining land records is also effective especially in Utrakhand.

#### **Transformative Impact of ICT (success stories from Rural India):**

##### **Mr. Altrin – from a fisherman to Philanthropist (Arundati, et.al., 2010)**

This is a story from Island of Rameshwaram, where a fisherman son Altrin stuck up with polio in his early childhood. After finishing school and during a Diploma in Computers he met secretary of All India handicapped Disabled Association, who inspired him to do the service of disabled person of village. He organized a camp for disabled person very first time in Rameshwaram Island, where 300-400 disabled participated. At present Altrin and his friend David are running a support group "Nesakkarangal" – in Tamil it means Loving hands.

##### **Mrs. Chandrakala Bhaurao Thakare, - Spark of life and hope in people's Life (Arundati, et.al., 2010)**

57 years old, Chandrakala Bhaurao lives in the village of Nimbhi in Morshil Tehsil of Amravati District in the state of Maharashtra. She worked as a farm labourer and domestic worker. She started lose vision due to old age and nearly totally blind in both eyes. She was not able to attend an Eye camp at Naya Wathoda (a mobile van eye hospital), due to poor financial conditions. The villagers helped her and she gets operated successfully. She consulted the gram sarpanch and started a mobile van eye hospital having highly equipped facilities and so far conducted over 1000 camps benefitting nearly 28000 patients in Maharashtra.

##### **Ms. Devasana- A deserted wife to reputed computer teacher (Arundati, et.al., 2010)**

It is a story of Ms. Devasena, from Annavasal of Pudukkoti District, South India. She had been deserted by her husband and she left alone with two daughters. Devasana doesn't lost the hopes and joined a Village Resource Centre (VRC) where she had a training of computer and basic coding - editing knowledge of HTML in Tamil language. She also had the Microsoft training makes her perfect in MS-office, digital word and typing. She became skilled in typing in mother tongue, Tamil and gets a job of computer teacher in Kokkali Matriculation School. She is proud to be a teacher and giving her best to the society.

**Real challenges in ICT implementation:** These success stories don't show the entire picture of happy ending and prosperity in villager's life. We do feel that the success is definitely there with the hard work, determination and commitment but up to what level is the key. George Barnard shah rightly quoted, "You see things; and you say, "Why?", but I dream things that newer were; and I say, "Why not?" This determination is being needed but unfortunately this spark is missing in most of the villager's life.

**The basic challenges in front of villagers in implementing the ICT are:**

Lack of awareness	Fear of changes	Process of Computerization	of Government / NGO's Support
Mind set, fear and consequences	The process; how does one go about it	Financial resources and computer equipment	Regular inputs from the Government official
Lack of knowledge of ownership	Limited local expertise in computerization	Electricity – alternative power supply	Financial Support and Infrastructure
Lack of awareness about the benefits	Lack of a clear perception of how to use ICT resources	Training of Staff – ICT skills	Training at regular inputs
Implication of not integrating ICT in functional activities	Integrating ICT in Private and Public enterprises	Lack of ICT strategic plan	Regular updates on ICT development and management

Table : 1 – Basic challenges of Villagers to implement ICT

**Efforts of Uttarakhand e-governance projects and limitations:**

The Government of Uttarakhand is making effective initiatives to implement ICT in Uttarakhand especially in rural and suburban areas. The major projects for e-governance implementation are as follows:

Dev Bhumi: Uttarakhand government has launched Citizen Centric Land Records Website of Uttarakhand – “Dev-bhoomi” on 9th Nov, 2006 with the objective of making available the entire Land Records Data of all the 13 districts in the state on Internet.

**Online application form:**

Department wise public utility forms

Government orders

Government tenders

Online employment news

Online government Notifications

Online Weather Information

Online Market Information

Online Examination results

Limitations of Government:

Extreme physical conditions including remote and isolated villages.

Inadequate infrastructure.

Hill areas and natural hurdles.

High illiteracy rate especially in semi urban and village areas.



Techno phobia of villagers to adopt technology

Inappropriate supply of Electricity and connectivity.

**Survey questionnaire:**

A survey has been conducted on the 3 villages of Hardwar i.e. Haripur Kalan, Budpur Jat and Brahmpur, gurukul Narsan. These are the extreme villages on the outer skirt of Hardwar. There were two sets of question i.e. one for Gram Pradhan and another for Gramin-jan (villagers).

**The questions were formulated to get an overview regarding traces and impact of ICT in the villages.**

Applied on 100 samples

Stratified Area Random Sampling

**The 100 villagers shown enthusiasm and the basic findings of the survey are as follows:**

Knowledge about Information, Communication & Technology



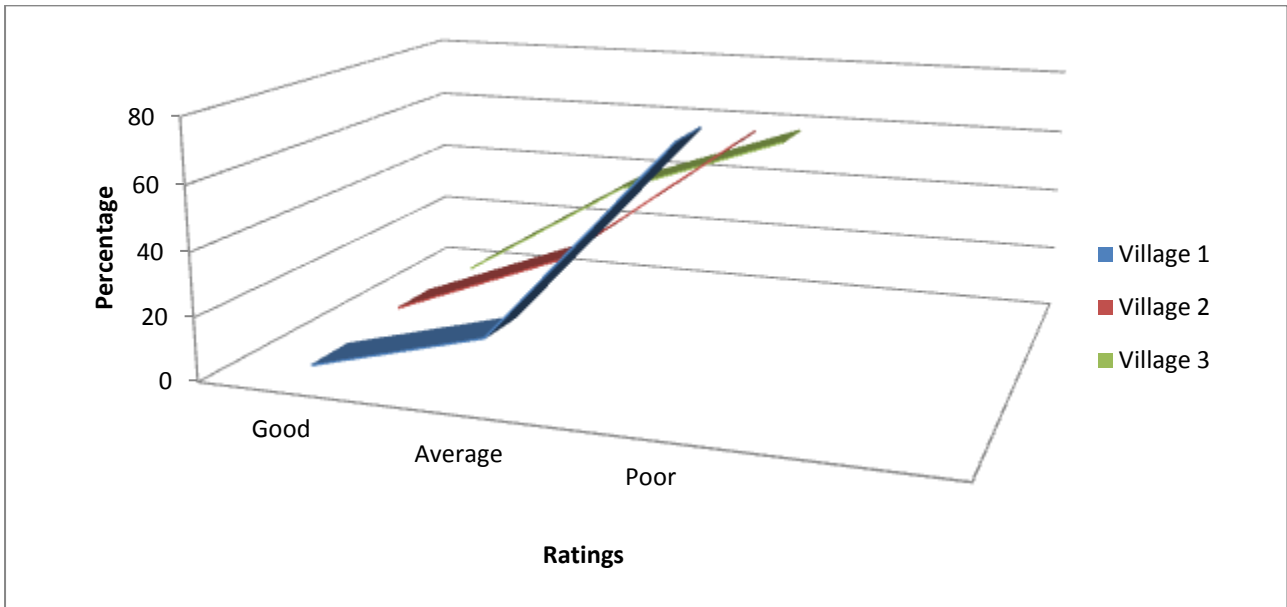
Information – 68.98 %

Communication – 22.06 %

Technology – 8.96 %

Level of implementation of Information, Communication & Technology in villages

	Village 1	Village 2	Village3	Avg. -	Avg.-	Avg.-
Good	3.09	5.24	4.20	17.87	26.86	37.86
Poor	79.04	67.9	57.94			



### 3. Need of Information, Communication & Technology in villages

Information – 21.76 %

Communication – 30.13%

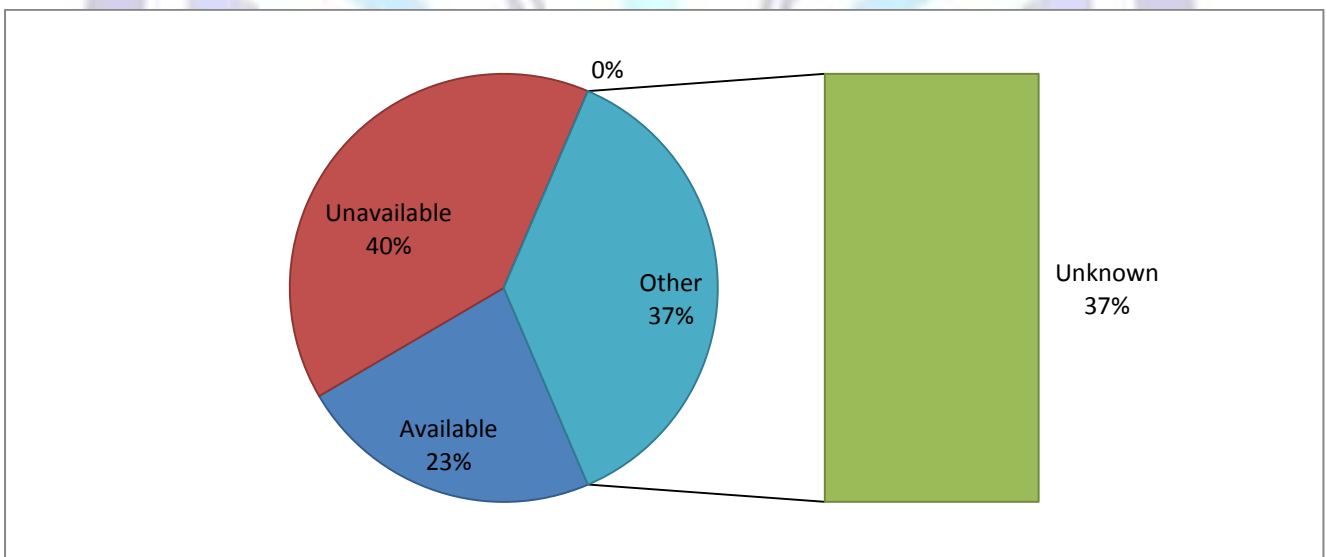
Technology – 48.11%

#### Availability of resources for Information, Communication & Technology in villages

Available- 23.00

Unavailable-39.87

Unknown-37.13



Probable solutions to implement ICT in rural areas:

**Mass awareness program exclusive at grass root level of village.**

To increase the literacy rate.

New innovations and initiatives from Govt. & NGO's to implement ICT.

Communication—especially wireless to be strongly implemented.

Information hubs to be built with definite support of high end tech. and communication.

It is better to provide online jobs to the youngsters in the villages to stop their migration to urban areas.

E-entreprenurship is the emerging trend and efforts should be made to aware youth's about it so that ICT can help them to provide sustainable environment for development.

E- education can raise the level of competency of the students studying at government primary schools in villages. Efforts to provide them all the latest technology via video conferencing or through Gyan Darshan channels.

Mobiles are more popular so it is better to opt the ways through villagers can move to much more advance technology of M-commerce. Many big players in Mobile comm. like Reliance, Airtel, Tata must take initiative for its implementation.

People friendly environment to use ICT. Graphical User Interface (GUI) standards must be opted and user friendly interfaces must be provided to villagers to avail all the facilities to ICT. It can be voice based guiding technology.

**Conclusion:**

The endeavours of the Government looks splendid but it looks so that they are bound to the specific range which is in around the major cities of Uttarakhand. The semi urban and village areas have mobile the major technological tool among ICT. The connectivity is mostly dependent on BSNL but the other major players like Reliance, Tata are also making some impact in hill and remote areas. The technology is robust in major cities but in the hill and remote area it looks deserted. The efforts made by the government with the help of NIC are having major impact in city nearby areas only. A major has to be cover up with sincere and continuous efforts.

The ICT awareness is definitely there in the Hardwar District, but the villagers are quiet unaware of the Uttarakhand government efforts. The efforts made on the village are not at all effective in all the three villages and there is very less impact on ICT on these villages. ICT is a standard medium where the Information is communicated through technology. Keeping this simple concept in mind, we must think of as the government is already running a big program ICT. It is better to work it out in best possible manner for efficient result rather than to propose a new system. After all in the social and democratic structure of India, the government is mainly in power to execute all the plans. One cannot always blame the Government for not doing this or that. The Government can felicitate ICT but the actual implementation is being dependent on the villager's efforts & zeal to adapt it.

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