Rural India : IT Penetration and knowledge revolution Role of MSSRF

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Abstract

Slowly and steadily, Indian villages are getting wired up, we all saw the model of growth evolved by – neighborhood cable operators, it is only a matter of time. New ways of communicating with rural India are beginning to emerge. If cable television can happen, can broadband and convergence be far behind? Liberal exchange of information and experiences over the internet, person – to –person communication amongst virtual communities spread over thousands of miles, distribution of products and services though this multi- transactional conduit, is converting today's world in to a vibrant global and information village.

Keywords : Rural India, Information Dissemination, Knowledge Management, MSSRF

0. Introduction

Today by Internet – the enabling technology, the era of information and communication has triggered a "transformation roller- coaster" across countries, economies and societies. Digital utopists believe that this - planetary scale revolution has the potential to end centuries of isolation, neglect and leap frog slumbering societies to a handy mix of empowerment and opportunity.

Rural India is in urgent need of knowledge empowerment and the challenge before us now is to enlist technology as an ally in the movement for economic, social and gender equity. A national grid of virtual universities / colleges devoted to harnessing communication technologies and the vernacular press can play a critical role in triggering such a knowledge revolution. M.S.Swaminathan's experiments on such venture, MSSRF- Tata virtual Academy for food security and rural prosperity, designed to serve as a resource center for all such initiatives.

India is one of the three fastest growing Asian economies – poised to be one of the world's great economic powers, with a 7% growth rate that is being propelled by the information technology revolution.

1. IT Presentation in Rural India

Today there are over 15 million villagers in India who are aware of the Internet and above 300,000 villagers have used it. Ten years back, history was created with public call office phone booths (essentially manually operated payphone facilities) opening in every corner of the country. This – experiment was an instant success and contributed to hundreds of thousands of jobs.

Over the next two years, World Tel is expected to provide 1000 centers in Tamilnadu with 2 to 20 terminals in each center. If successful, this experiment can be replicated easily to all 27 states leading to over half a million internet users through this experiment alone. The existing 600,000 public call offices in India will soon be transformed in to public 'tele-info-centers' offering a variety of multimedia information services.

1.1. The cyberdhaba

22 Km. From Lucknow city in a village named Sewai, an entrepreneur, Suman kumar , had been successfully running a library sponsored by the Rajiv Gandhi foundation for over a year, when he was

selected from among 12 of the foundations libraries in Lucknow district to set up cyberdhaba (information kiosk). Ushafone gave him a connection at a subsidized rate.

He had been using a public call office and an e-mail facility for the local villagers. He has one computer and over a dozen students (a majority of whom are girls). In the mornings, he downloads the local newspapers the villagers; during the evenings he - entertains them using CDs of popular movies.

1.2. Accessing higher-level information

Studies have indicated that if the content has direct relevance and will result in commercial gains; people in rural areas are willing to pay for information services. Consumerism has altered rural buying behavior in recent years. Spending patterns of those who spend are now adapting to face the technology bug.

Today's rural children and youth will grow up in an environment where they have ' information access' to education opportunities, exam results, carrier counseling, job opportunities, government schemes and services, health and legal advice, world – wide news and information, land records, mandi prices, weather forecasts, bank loans, livelihood options.

If television could change the language of brand communication in rural India, affordable web connectivity through various types of communication hubs will surely impact the currency of information exchange. As the electronic ethos and IT culture moves into rural India, the possibilities of change are becoming visible.

2. India's first Computer – literate village in Malappuram district (Kerala)

The small laid – back village on the banks of the Nila in the north Kerala district of Malappuram now has pride of place on the Indian map: Chamravottom is India's first Computer – literate village.

Although this means that only one member of each of the 860 households has been trained to use the mouse and keyboard, it is a big leap forward for the spread of information technology in Kerala, a state that has achieved 100 percent literacy.

As many people in the village work abroad, the coordinators of the Akshaya project- implemented by the state IT department and panchayats along with entrepreneurs – used the lure of communicating via – e mail to get the villagers to participate in the programme.

The idea of making the district computer- literate was proposed by Malappuram district panchyat president M.Umner and Vice President Abudulrahim Randathani to IT minister P.K. Kunhalikutty, who belongs to the district.

Then IT Mission Director M.Sivasankar and Secretary Aruna Sundar Raj cut through the red tape to launch the state wide programme, complete with one community net kiosk for every 1,000 households. The project launched by president A.P.J. Abdul Kalam in November, before last year has received a boost with Chamravattom's achievement.

Malappurram district project programming officer and author of two popular Malayalam computer texts, Anwar Sadath, is creating software tools to help Akshaya centers launch new courses after meeting the minimum literacy target.

Meanwhile the people of Malauppuram are fast clicking away on their keyboards to achieve another distinction – of being the country's first computer- literate district.

3. A Knowledge Revolution: MSSRF

The onset of the industrial revolution in Europe marked the beginning of technological divide both among and with in nations. With explosive progress in many areas of technology like information and communication, space, bio- and nano – technology, this gap is widening. The challenge now is to enlist technology as an ally in the movement for economic, social and gender equity.

The M.S.Swaminathan Research foundation (MSSRF) Choose the imparting of a pro- nature, pro- poor and pro-women orientation to technology development and dissemination as its mandate when it started functioning in Chennai in 1989.

3.1 Information village project

The dialogue in 1992 was organized on information technology, which gave birth to the information Village project in the union territory of Pondicherry, with financial support from the international development Research center (IDRC) of Canada. Since information, to be of value to rural women and men, should be location and time specific. The term knowledge center was used to stress the need for converting generic in to location specific information and for training local women and men in adding value to information. Value – added information is appropriately referred to as knowledge and " rural knowledge centers" can generate opportunities for educated youth in villages to find a career in knowledge management and dissemination. We should train at least a million rural knowledge managers during this decade.

3.2 MSSRF : Guidelines for bridging digital divide

The MSSRF 'S experience in bridging the digital divide in rural India has provided some basic guidelines such as the following for harnessing this powerful tool to cross social, gender, genetic and technological divides.

Connectivity and content should receive concurrent attention.

Constraints must be removed on the basis of a malady- remedy analysis; for example, wired and wireless technologies could be used where telephone connections are not adequate or satisfactory. Similarly, solar power can be harnessed where the regular supply of power is irregular. The approach should be based on the principle that is an implemental solution for every problem.

The information provided should be demand driven and should be relevant to day – to - day life and the work of rural women and men. Also, semi- literate women should be accorded priority in training to operate the center, since this is an effective method of enhancing the self-esteem and social prestige of women living in poverty.

The knowledge centers should operate on the principle of social inclusion, thereby presenting a win-win situation for all.

The programme designed to empower rural families with new knowledge and skills should be designed on the antyodaya model, where empowerment starts with the poorest and most underprivileged women and men.

The local population should have a sense of ownership of the knowledge center. It should be client managed and controlled, so that the information provided is demand and user driven.

The local population should be willing to make contributions to wards the expenses of the knowledge center, so that the long- term economic sustainability of the programme is ensured. Contributions in cash or kind generate a sense of ownership and pride.

3.3 Digital divide: Linkages

To be effective, the following linkages will have to be developed.

i. Lab-to-Lab: this will involve organizing a consortium of scientific institutions and data providers.

ii. Lab to Land: this will involve symbiotic linkages between the providers of information and the users, so that the information disseminated is relevant to the life and work of rural families.

iii. Land to Lab: there is considerable traditional knowledge and wisdom among rural and tribal families concerning the sustainable management of natural resources, particularly water. Therefore, technical experts should not only learn from traditional knowledge and experience but also take steps to conserve for posterity dying wisdom and dying crops.

iv. Land to Land: there is much scope for lateral learning among rural families; such learning has high credibility because the knowledge coming from a fellow farm woman or man would have been subjected to an impact analysis from the point of view of its economic and social relevance to the population.

3.4 Rural knowledge centers: NCTs (New communication technologies)

Rural knowledge centers based on an integrated application of new communication technologies, like the Internet and cable TV as well as conventional ones like community radio and the local language press can become effective instrument for harnessing the power of partnership among professionals, political leaders and public policy makers, the general public and rural families. Such partnership alone can help to bridge the growing divide between scientific know – how and field level do – how.

3.5 Virtual Academy for food security and rural prosperity (VARP)

Based on the above “learning “ by MSSRF scientist, the application of ICT techniques needs of rural families are being intensified and extended through a virtual academy for food security and rural prosperity abbreviated as VARP with support from the tata social welfare trust and a range of data generators. Agriculture, comprising crop and animal husbandry, fisheries, forestry, agro-processing and agribusiness is the backbone of the livelihood security system of rural areas, where more than 70 percent of our population lives.

3.5.1 A national Grid of Institutional Structures

During the last few years efforts have been made for harnessing modern information and communication technology through structured organizations like virtual universities / colleges in order to leapfrog in our quest for bridging the digital divide.

As a result, the following virtual universities have either already come in to existence or are in advance stages of development.

- Virtual universities for agrarian prosperity in Maharastra .
- Virtual university for the semi- arid tropics set up by the international crops research Institute for Semi-Arid tropics Hyderabad.
- Virtual universities for Agriculture trade in Kerala .

Many more initiatives of this kind may soon come up, so that, along with the Indira Gandhi National Open University, we can organize a national grid of insititinal structures, which can help to reach the unreached interms of knowledge and skill empowerment. The MSSRF's experience also shows that bridging the digital divide is a powerful method of bridging the gender divide in rural India. We find that the self-esteem of poor women managing computer – aided knowledge centers has gone up speedily and significantly. This is another reason why we should accelerate our efforts to achieve technological leapfrogging in the field of ICT.

3.5.2 Virtual Academy : Hub and spoke model of organization

The experience now being gained in the country in the area of fostering a self help revolution based on micro- enterprises supported by micro-credit offers an excellent opportunity for initiating community owned and managed rural knowledge centers which can be linked together in the form of a virtual academy using a hub and spoke model of organization, sustainable self-help groups require reliable and remunerative market linkages. The knowledge centers are in a position to foster such producer - purchaser linkages.

3.5.3 Rural India : knowledge empowerment

Rural India is in urgent need of knowledge empowerment in areas like genetic literacy (genetically modified organisms and new technologies), quality (codex alimentarius standards and sanitary and phytosanitary measures) and legal literacy (implications of the plant variety protection and Farmer's Right Act, Biodiversity Act, Intellectual Property Rights, etc)

A National grid of virtual universities / colleges devoted to harnessing in an integrated manner the internet, cable, TV, Community radio and the vernacular press for reaching every women and men in our villages can play a critical role in triggering a knowledge revolution in rural India.

To achieve this goal, however, the virtual universities should be structured as 21st century organizations designed to link professionals with everyone in rural and tribal areas, whether man or woman, and irrespective of level of literacy and extent of ownership of assets, the MSSRF- Tata virtual Academy for food security and rural prosperity is designed to serve as a resources center for all such initiatives.

4. Conclusion

India is a land of smallholdings. A small farm is ideal for sustainable intensification through eco-agriculture. A small farmer however suffers from many handicaps including access to technology, credit and remunerative markets. It is only by helping such farmers to overcome their handicaps, that small farms can become instruments for an ever – green revolution, characterized by enhancement of productivity in perpetuity, without associated ecological harm.

The smaller the farm, the greater is the need for marketable surplus to derive some cash income. Our farm families can face the challenges of the new global trade regime only by achieving revolutionary progress in the areas of productivity, quality, diversity and value- addition.
They have amply demonstrated through the green revolution that they are ready to help the country, if empowered.

The most important step to take in bringing about such empowerment is the initiation to a knowledge revolution in rural India through the effective and meaningful use of modern information and communication technologies.

A digital rural India may seem far away in time, but rural communication via information technology has already started its learning curve.

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