Information Communication Technology, E-Governance and Social Change in Kerala

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Abstract

Revolutionary progress in information communication technology (ICT) has redefined the human notion on time and space which has profound impact on governance and service deliverance of state. Subsequently, the new generic technologies have made drastic changes in the frontier areas of technology and this resulted change in the relationship of government and governed. E-governance is evolved from intensive application of ICT for state administration to improve quality, reduce time-delay and enhance effectiveness and efficiency of governance *per se*. Mass application of ICT in India, though a recent development, however, this has great significance in setting priorities in various developments of different agencies and departments of governments. In this regard an innovative public private partnership programme for government service delivery has been implemented in Kerala called, *Akshaya*. This project is an innovation in governance, partnership of state and private entrepreneurs.

This prorgamme is acting as an instrument in rural empowerment and economic development. The project is a catalyst in creating massive economic growth; generation of direct and indirect job opportunities like e-learning, e-transaction, e-governance etc.

Multi-beneficial advantage and inclusiveness in governance is another major aspect of this programme. These centers are very positive to adopt newer technologies to provide huzzle-free services to citizens. For example the use of Mobile in governance which enhance transparency and openness in governance. In addition to these advantages, this also provides accountability. This paper tries to analyses the entire gamut of ICT in governance vis-à-vis *Akshaya* project in governance with special reference to Wayand district of Kerala.

KEYWORDS: Information communication technology, Kerala, Akshaya, social change, benefits

Introduction

The new technological revolution that emerged during the last quarter of the 20th century radically transformed the lives of people. The new generic technologies made revolutionary changes in the frontier areas of technology and it also affected the process of production, distribution and consumption in the entire world. Technologies have had significant impact on people's lives during the twentieth century, but none was as profound as that made by Information and Communication Technology (ICT) on human society. ICT in India is of a comparatively recent origin and it had great significance in setting priorities in organizational developments of different sectors. ICT is considered a convenient tool in the outreach of the process of intended national development. The challenge of directing the fast pace of socio-economic changes within the framework of

available time and resources can be met only if the requisite ICT is properly disseminated. Thus, the proliferation of ICT is considered to be a prime factor for the growth of developing countries.

Akshaya is an ICT designed for a development project implemented in the State of Kerala aimed at bridging the digital divide. It addresses the issues of ICT access, basic skill sets and availability of relevant content. The Akshaya project was launched by Dr. A.P. J Abdul Kalam, who was then the President of India, on November 18, 2002. The Akshaya E-Centre service is available at an interval of every 2 kilometers. The Akshaya Centre offers e-literacy, e-service and any other relevant service based on ICT. Akshaya is acting as an instrument in rural empowerment and economic development. The project is a catalyst in creating massive economic growth and creation of direct and indirect employment in the state by focusing on various facets of e-learning, e-transaction, e- governance etc. Thus, the project is having a long-standing impact on the social, economic and political scenario of the state. Akshaya was conceived as a landmark ICT project by the Kerala State Information Technology Mission to bring the benefits derived from technology to the entire population of the state. The modus operandi for this was the establishment of grassroots ICT centres at the Panchayat/Municipal ward level(http://www.akshaya.kerala.gov.in/index.php/home)

Information technology is the fastest-growing segment in Indian industry and application of ICT in various sectors proves to be a convenient tool for eradicating social development issues. The role of ICT in transforming India to a more modern system gains considerable significance and therefore forms a core content of the study. The concern for social development in India has acquired considerable significance in the resolution of social issues like overpopulation, totally neglected rural health conditions, high levels of illiteracy, malnutrition and inaccessibility of rural areas even after decades of political independence. In order to attain the socio-economic growth through developmental objectives, the Government of India initiated successive Five-Year Plans. This was intended to introduce many rural development programmes of varied nature, some of which are exclusively meant for the alleviation of social development concerns.

ICT Social Development and Social Change

ICTs have been playing significant roles in promoting social development in every nation. The role being played by communication media in education and extension services cannot be overlooked. New ICT's are drastically transforming the environment in which individuals and society live and interact. Communication costs are coming down and information flow among concerned stakeholders has become much quicker. The main objective of these communication technologies, from a development perspective, is that of empowering people through knowledge. It is believed that it would develop in people and in communities a learning and innovation capacity that would increase the effectiveness of their efforts to improve the quality of their lives. It is also argued rightly that knowledge is recognized as the fundamental building block of development options for disadvantaged communities around the world and the role of communication technologies becomes conspicuous in this process of envisioning this development.

Prior to the digital revolution's transformation of service activity, the provision of most services required the presence of the provider at the point of delivery. As a result,

services export took the form of migration of personnel to the location where the service was to be provided. The magnitude of income acquired through foreign exchange was limited by the restrictions on the movement of skilled and unskilled personnel set by immigration laws and practices of countries where the relevant service demand originated. The Indian government has declared ICT to be one of the thrust areas for the country's development and recognized its provision as an "essential service"(Thasian 2001). It has proposed many projects, which include telemedicine, distance learning, software technology parks, computerization of land and financial records of Panchayats at the rural development department and the setting up of info-kiosks in different part of the country.

Significance of ICT in India

The potential of ICT application in India is extensive and can be exploited by the extension system in agriculture and by the transfer of technology. Globalization has very adverse effects on Indian farmers because they have to compete with farmers of developed countries. To cope with the challenges posed by the globalization of agriculture, farmers have to produce quality product on a par with world markets at reasonable prices. Indian farmers need to be well informed and well trained in the management of natural resources and production of agricultural commodities. Therefore, ICT application in India led to the creation of extension agencies to use modern technologies in place of traditional approaches, which would provide information on agricultural matters to farmers in the context of the globalization of agriculture. The biggest advantage of the use of these technologies is that it is far more interactive and personalized and can therefore render services, particularly providing information, as per the needs and requirements of the end users. Such a facility makes a favourable impact on adoption and utilization of the improved and innovative techniques in agriculture.

Information and communication technology in India is a comparatively recent area and it has had significant impact on the setting of priorities and organizational development in different sectors. ICT application in India intends to drastically improve the delivery of information related services to citizens, agriculture extension services and provision of health and social services. ICT in India also enables the increase of economic opportunities through process efficiency, promoting participation in expanded economic networks and by creating scopes for employment. Thus, ICT application in India becomes a convenient tool not only for eradicating social development issues, but also boosts socio-economic growth of the nation.

The growth of the education system by ICT application in India is fuelled by an urgent need felt by our nation to close the gap with the developed nations in education levels. ICTs contribute to the pedagogical aspects of teaching and learning. The single most important factor in improving the education system is the use of information technology. information technology can be used both for formal and non-formal education. Education for empowerment means gaining understanding and control over social, economic and political forces in order to improve the standing of those thus empowered in society. ICT satellite-based communication systems are opportunities for technological leapfrogging. It is ardently felt that a technological choice based on the above and appropriate to the location, along with suitable ICT applications and content relevant to rural areas, could drastically improve the delivery of information related

services to citizens, including agricultural and health extension services and services in the social sector. However, demonstrative success stories in the context of developing countries are sparse and can hardly substantiate these arguments.

State-wise Literacy Rate in India

States/UTs	1951	1961	1971	1981	1991	2001	2011
India	**18.33**	**28.30**	**34.45**	**41.43**	**52.22**	**65.38**	**74.04**
Kerala	47.18	55.08	69.75	78.85	89.81	90.92	93.91
Pondicherry	-	43.65	53.38	63.18	74.74	81.49	86.55

Source: Office of the Registrar General and Census Commissioner, India

Information and Communication Technologies for rural development seem to have become part of the development planning in India since the Eighties. The Government of India has been trying to provide the necessary infrastructure required for changes in technology and organization that might be needed for social and economic transformation. However, social development in India requires planned institutional change to bring about the realization of manifold aspirations through social policies suited to its human needs.

The developments in Information and Communication Technologies in India are often treated as the way forward in achieving faster economic and social development. India has a lot of potential to capture the maximum benefits that can result from this because it can furnish a large number of English-educated technicians in infrastructure. The growing service industry all over the world opens up a huge market to ICT. This is capable of generating employment and foreign remittances.

Kerala seems to have an edge with regard to the quality and quantity of human capital. Kerala has a collection of the most qualified technically literate youth from all stratas of society. But these preconditions have not resulted in the proper development of Kerala's economy. Due to its possessing such a bulk of literate population and well-developed infrastructure facilities, Kerala appears to have every opportunity to harness the maximum potential of ICT for solving its developmental issues.

In the Nineties of the last century, the United Nations ratings for the different regions of the world recorded Kerala as an economic miracle. In several social parameters the state was at par with the developed West. This unbelievable feat was achieved in spite of a lesser per capita income and lack of industrial back up. The great economist Amartya Sen attributed this achievement to the spread of education to in Kerala's society(Sen and Dreze 2000). A section of the educated among Keralites utilized the services of information technology for further economic development. But the vast majority did not take to this technology for consolidating and furthering their achievements on the social front. A digital divide developed in the state, as elsewhere, between a minority that could use information technology for development and the majority that could not do so (Ibid.). Planners on the socio-economic front soon realized that the consolidation of socio-economic development in Kerala was possible only by

removing the digital divide in the society. The vast majority of the populace would have to be equipped with the tools furnished by Information and Communication Technology to achieve tangible progress. The less privileged sections had to be empowered with ICT. Those at the helm in the three-tier Panchayat system in the state realized the importance of ICT for socio-economic development and they came forward with plan proposals and programmes to bring information technology to common households. Meanwhile, the government constituted the State Information Technology Mission for achieving transparency and speed in administration, so as to make it more responsive to the needs of the people and for grassroots level application of information technology as a part of social engineering for development (Kuriyan and Ray 2009).

ICT and Social Change in Kerala

Kerala has made a considerable progressive transformation in all sectors, especially in the socio-economic field. Through its initial stages, Kerala adopted a development model with a view to increase the quantity of income of a country, its distribution and wise utilization contributing to the quality of life. The focus of the Kerala model on long-term goals serves s a statistical indicator for the development paradigm in the state (Oommen1999). However, there are several challenges that threaten the sustainability of Kerala's achievements. High unemployment, low economic growth, low income, government budget shortfalls, high dependence on outside remittances, vulnerability to policy changes etc. are a few among them.

Kerala has got an edge with regard to quality and quantity of human capital. Due to its significant literate mass and well-developed infrastructure facilities, Kerala has every opportunity to harness the possibilities of ICT for solving its developmental issues. The present study also focuses on state initiatives in social development through ICT (Kurian 2008).

Profile of Akshaya Project

The AKSHAYA project is a unique and versatile project designed to bridge the digital divide by making at least one member in each of the 64 Lakh families in Kerala digitally literate through the use of the local language and interesting design. The project was implemented in Kerala in three specific phases. The first phase is the pilot project implemented in Malappuram district and was inaugurated by Dr. A.P.J. Abdul Kalam, former President of India, on the 18th November 2002. Malappuram is especially noted as holding a sizeable Muslim minority, which was educationally and socially backward at a time. Another feature of the district is that it is home to a large number of people working overseas. The second phase was implemented in the Kollam, Pathanamthitta, Ernakulam, Thrissur, Kozhikkode and Kannur districts. The third phase has been implemented in Thiruvananthapuarm, Alappuzha, Kottayam, Idukki, Palakkad and Wayanadu and Kasargode districts.

The project was a unique design in the known history of similar ICT4D and ICT4C projects in the world. It is has three concepts, firstly that literacy about any project is its foremost objective; secondly that it must work towards the establishment of access points; and finally that it must focus on sustainability and enhancement of a digitally inclusive and enabled society, which is then able to attain a real state of e-governance.

Akshaya is acting as an instrument in rural empowerment and economic development. The project is a catalyst in creating massive economic growth and in the generation of direct and indirect employment in the state by focusing on the various facets of e-learning, e-transaction, e-governance etc. The project is having a long-standing impact on the social, economic and political scenario of the state.

The prime objective of Akshaya is to bring ICT accessibility and services within the reach of the common man and thus to bridge the gap between the *Information Rich* and the *Information Poor*. The Akshaya project was conceived in such a way as to achieve this objective primarily by developing ICT access points (e-centres) and also by addressing issues in the three main areas:

- **Skill sets**: viz. giving e-literacy training to at least one member in the 64 lakh families of the state.

- **Content Development**: viz. content relevant to local people in Malayalam to be created on web and digital media.

- **Services Delivery**: viz. e-learning, e-business, e-payment, e-governance etc. to be carried out. The hope that Akshaya will act as an instrument for the state's overall development is being fulfilled. By bringing ICT to all sections of society, it acts as a vehicle for improved quality of life, accessibility to information, transparency in governance and overall socio-economic growth.

Benefits Envisioned

After the completion of the project

- At least one computer-literate person in every home in the state

- Network of *3000 e-kendras* (e-centres) throughout the state

- Delivery of public service and e-governance applications through these *e-kendras*

- Unmatched access for the rural population to ICT services

- Generation of locally relevant e-content

- 3000 direct employment opportunities and investment of over Rs. 100 crores

- Cheaper communication through Internet telephony, e-mail, chat etc.

- ICT4D tools in Telehealth, Agriculture, Resource Management etc.

- Increased PC and ICT applications penetration

- E-pay of utility bills at one counter

- E-learning, *e-krishi* and e-commerce at the doorsteps of the citizen

The Akshaya project of the Kerala state showed ambitious records in bridging the digital gap and in leapfrogging technological distance existing in Kerala society. An Akshaya Centre is available every 2-3 Sq. Kilometers which cater to the digital needs of 2000-4000 families. The study area of the Idukki and Wayanad districts is an extremely backward area in Kerala. The study revealed that the Akshaya project made tremendous records in the achievement of e-literacy and e-governance. The area is particularly known

for the habitation of backward people including Scheduled Tribes and other castes with low living standards.

The first phase of the Akshaya project is known as the e-literacy phase capable of providing basic computer awareness to one person from each family. The e-governance initiatives initiated by the central and state governments were materialized through such platforms. The e-district project of the Kerala state government is the paramount example of digitalized society.

The social change delivered by the Akshaya project has been noticed worldwide and has been instrumental for similar projects across the world. The pilot project at Malappuram district – a place distinct for its Muslim majority population, low-literacy rates and large scale migration to Gulf (GCC) countries – had exemplary outcomes and even senior citizens from Muslim families use the Akshaya centres to communicate and interact with their relatives abroad.

Technology and its use often generates development and catalyses social formation, empowerment, upliftment of different social classes across the globe. The masters of technology often controlled the world and their supremacy resulted in developmental imbalance in the world order (Joseph *et.al* 2005). ICTs are considered to be social technologies and their proliferation is a necessity of the time, as stated by Mr. Al Gore, Former Vice President of the USA.

The Akshaya project was conceived as a Kerala model of ICT generation and digital inclusion and it is capable of serving as an example to the entire developing world in the harnessing of aspirations and development of capabilities through ICTs.

Moreover, the project has been instrumental towards social change in the area concerned. The main drawback of every technological advancement has been identified in its limited availability to the deprived classes. ICTs are considered to be capable of making drastic changes in society. Economically backward communities and regions are usually less benefited from changes in the technological sector. So, community information centres are the actual and proper answer to bridging these technological gaps. The Akshaya project, CSC, has become relevant in such a context and scenario.

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