

Digital Divide in Democratic India

Sonia¹, Sandeep Kumar²

¹Department of Information Technology, DAV College Sector-10 Chandigarh, INDIA

²Department of Management, Shree Atam Vallabh Jain College-IMTS, Ludhiana, INDIA

Abstract— Emerging technologies in information technology are use in all departments of government. The information technology, partition citizens into two broad categories in which skilled citizens easily use the latest technology whereas rural people unable to use. In this paper, discuss how e-government removes digital partitioning between skilled and unskilled citizens. Information technology helps to use in various places. Further, government projects are discussed by which it ensures to keep the digital division of citizens declined.

Keywords— digital government, e-governance, ICT.

I. INTRODUCTION

India is one of the leading countries in Asia where IT brings into play and has 28 states, 7 union territories. Literacy rate in a few states is still below 50. The literacy rate is one of the major reasons that people of India are divided into categories where some know how to use ICT tools like internet technologies, mobile, etc. And others do not have even a little knowledge to access the internet or computer.

Around the world, many new technologies are tested. Advancements are achieved in a minimum possible time. However, there are certain constraints, especially in developing nations through which a gap exists between urban and rural people this gap known as Digital divide. It is a diverged technological know how between two sets of people.

II. ROLE OF INFORMATION TECHNOLOGY IN DIGITAL DIVIDE

In India the gap between various communities is due to different languages, huge population, etc. Government unable reach its services to every citizen. Information technology brings a lot of changes to the nation and citizens. Role of IT on India is as follows:

- A. As people not know how to fill e-forms, income tax online, they take help from others. There may be chances that they manipulate the written things and take advantage from the person who needs help.
- B. Citizens directly communicate with government and take e-services given by e-government.
- C. It's very easy to find any information in a single click.
- D. With the use of IT, economy of India will increase. IT also shows growth towards the GDP of India.

Government plays a role to reduce the digital divide. In this paper, the concept of e-government is discussed with their projects. IT reaches to every citizen of India by e-governance.

E government acts as an interface between the government and the citizens. E-government directly provides services to all citizens (G2C). E-government becomes popular in all the developing countries because with the implementation of government of web services available 24/7 days for citizens, employees, entrepreneurs and to government itself. E-governments act as a bridge between those who know and do not use IT. E-Government takes initiative to reduce the digital divide in a country.

Developing countries involves a tremendous amount of investment for e-government projects. Public sector is under the control of government. E- Government becomes a boon or public sector by helping them to increase their output and efficiency. There is a great requirement for automated public services such as booking of railway tickets and payment of electricity bills. With the advent of e- government, services are delivered in a proper and efficient manner to the citizens. E-government is about transformation of government with the help of Information Technology tool.



Fig. 1 Example of Government on Web

E-Government projects provide services to citizens so that they acquire as much knowledge from new technology and thus India becomes modish. The e-governance projects have been hailed successful in several states and changed the way the government functions, reducing corruption and allowing free flow of information. The table provides a list of E-Government projects for citizens of India along with the benefits to the citizens. These applications represent the low hanging fruit; applications that deliver significant benefits and yet are not difficult to implement. Apart from these, few projects are in progress. Behind the projects, the basic idea is of to make SMART (Simple, Moral, Accountable, Responsive and Transparent) government. E-government ensures to handle any problem in a SMART way.

TABLE 1
LIST OF SUCCESSFUL E-GOVERNMENT PROJECTS IN INDIA

Projects G2C, Year of Implementation and State of India	Benefits to Citizens
CARD (Computer-aided Administration of Registration Department) April, 1998 Andhra Pradesh	<ul style="list-style-type: none"> • Property taxes • Land registration
E-Choupal June 2000 Madhya Pradesh, Uttar Pradesh, Karnataka and Andhra Pradesh	<ul style="list-style-type: none"> • Supply of high quality farm inputs • Benefits to Villagers
e-SEVA August, 2001 Andhra Pradesh	<ul style="list-style-type: none"> • Payment of utility bills/taxes, registration of births/deaths, registration of applications for passports , the issue of births/deaths certificates • Filing of Sales Tax returns, Trade licenses of MCH, B2C services like payments for Tata Tele services, Reliance, sale of Airtel Magic cards.
VOICE (Vijaywada Online Information Center) June, 1998 Vijaywada, Andhra Pradesh	<ul style="list-style-type: none"> • Online delivery of municipal services like tax collection.
FAST (Fully Automated Services of Transport) YEAR 1999 Hyderabad	<ul style="list-style-type: none"> • Issue of Driving license, motor registration, passport, birth certificates, social security and collection of fines • Less corruption • Reduction of intermediaries
Bhoomi (Online delivery of lands) July, 1998 Karnataka	<ul style="list-style-type: none"> • Property taxes • Easy access to land records
FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) June, 2000 Kerala	<ul style="list-style-type: none"> • On-line issue/payment of electricity, phones, and water bills, and fines.
Akshaya November, 2002 Kerala	<ul style="list-style-type: none"> • Provide e-learning, e-transaction, e-pay
Gyandoot January, 2000 Madhya Pradesh	<ul style="list-style-type: none"> • Savings of time and cost of service delivery to citizens.
VidyaVahini December , 2001 Phulgaon, Pune, Maharashtra	<ul style="list-style-type: none"> • Provides the opportunity for schools, teachers and students all across the nation • To express and share their creative and academic potential via the internet. • Computer education to 60,000 schools across the country
LOK MITRA, JAN MITRA May, 2001 Rajasthan	<ul style="list-style-type: none"> • Citizen Service Centre / e-Kiosks • Online Submission of Application forms and Land & Revenue Records • Public Awareness Services • Benefit to Rural People
Drishtee Connecting India Village by Village Year 2000 Haryana, Punjab, Madhya Pradesh, Gujarat, Orissa	<ul style="list-style-type: none"> • Offers mobile, Kiosk-based for rural and semi-urban people
NeGP (National E-Governance Plan) May, 2006	<ul style="list-style-type: none"> • 100% electronic filing, electronic payment mechanisms. • Use of Digital Signature Certificates for all transactions

Successful e-governance projects cover all modes of service delivery from to citizens. Some of the applications are enlisted above for each project. With the help of e-project Government enables to communicate with citizens, and they act like a milestone for removing the digital divide in from their life. Some of the e-government services are listed below:

- Services to the people living in far flung areas are available, thereby saving time and money in the progress of inhabitants.
- E-Government provides better quality public services, thus improve the quality of life of people living in a rural area.
- E-Government services lead to greater awareness of knowledge.
- E-Government provides people with Corruption free and development oriented governance.

III. REASONS FOR THE DIGITAL DIVIDE IN INDIA

A. Electricity

Electric Broadband is an innovation in the recent technology trends. Digital Divide still exists when penetrating into the rural areas. Electricity is one of the major reasons for the digital divide because IT equipments are accessible only with the help of electricity. Without electricity one cannot think to use IT tools.

B. IT penetration

An IT penetration, occasionally, is a method of evaluating the security of a computer system or network by simulating an attack from a malicious source. People cannot use IT facilities due to security reasons. One cannot trust as hackers can hack important piece of information any time and anywhere.

C. Internet industry

A Progressive Internet environment enough to close the gap. Internet industry is a reason for the digital divide as people who are not using the internet, are not conscious of latest news, updates, etc.

IV. CONTRIBUTION OF GOVERNMENT

A. Education

India continues to face stern challenges. Despite growing investment in education, 35% of its population is still illiterate. Education is the major contribution of government towards reduction in digital partitioning. Provide education to all citizens to enable IT and its services. Education is one area where the digital divide is prominent. Bridging through Education is one of the best ways.

There are many numbers of government school and colleges in India. Even government introduces computers in primary classes. The Government shall encourage the use of Information Technology in almost all educational institutions by way of giving special grants every year to enable them to put up the necessary infrastructure. The Government shall endeavor to teach the school level children the use of computers and to impart training through computers. Even Government with the help of the industry start training programmers for teachers to help them use information technology in the teaching process.

The education sector can be the most effective sector to predict and eliminate the negative impact of IT in all the sectors of industry. Schools and universities have also adapted to the information age by offering classes that prepare students for information technology jobs.

B. Financial support by government

The digital divide is declining day by day. 'Sakshat' tablet is one of the venture initiatives by the Ministry of Government of India and HCL Technologies launched on January 10, 2011. Sakshat tablet has been developed as part of the National Mission on Education through Information and Communication Technology that aims to link 25,000 colleges and 400 universities on the subcontinent in an e-learning program via an existing Sakshat portal. 'Sakshat' is a fully functioning device in order to attempt to bridge the digital divide. 'Sakshat' device does not aim to turn a little child into IT literate users. Provide this device to college students to bridge the digital. This is the key activities in Digital Divide movement.

Moreover, government of India gave financial support on the tablet so that it reaches to the youth end. As youth is the future of every country. The main reasons why and how Sakshat helps to reduce the digital divide.

- Indian people are still not able to buy electronic gadgets like laptops. Launch of tablet is one of the reasons.
- This project takes technology to every student at least an amount of cost.
- Provide IT education to all, introduce of 'Sakshat' is the very first step.

V. BARRIERS TO GOVERNMENT IN THE DIGITAL DIVIDE

- Lack of general awareness of new technologies in IT sector is one of the hurdles towards the digital divide.
- As large people come under below a poverty line (BPL). They are unable to use ICT due to their low wages.
- People are not comfortable to adapt new technology easily when it comes.
- Citizens who are not using the internet cannot exchange their ideas globally. Therefore, exchange of knowledge cannot take place.
- Language is one of the major barriers of the digital divide because the population of India is multilingual. On the internet, the large amount of data is in English language.

Crime on the internet is one of the major barriers in digital divide. People don't show interest to learn this new technology as cyber crime increasing rapidly. This is the reason that most of the aged people do not use e-banking facility.

VI. DIGITAL DIVIDE IN ASIAN COUNTRIES

All the Asian countries suffer from the problem. Is digital divide affected the development of countries? This is a question to every country. Answer of this is somewhere 'yes'. Because people, who are educated, enable to use IT tools only but those people who are not aware the new technology, they are unable to use IT.

In the below table, statistics show for internet users in Asia and rest of the world. In the Asia's percentage number of users is 42 compare to rest of the world is 58%. Analysis shows that there are more Internet users in Asia. Thus impact of information technology is much more than the rest world. Digital division in developing Asian countries are more.

TABLE II

INTERNET USERS AND POPULATION STATISTICS FOR ASIA [17]

ASIA Region	Population (2010 Est.)	%Pop. of World	Internet Users, Latest Data	Penetration (% pop.)	User growth (2000-2010)	Users% of World
Asia Only	3,834,792,852	56.0 %	825,094,396	21.5 %	621.8 %	42.0 %
Rest of the World	3,010,817,108	44.0 %	1,141,420,420	37.9 %	362.7 %	58.0 %
WORLD TOTAL	6,845,609,960	100.0 %	1,966,514,816	28.7 %	444.8 %	100.0 %

VII. CONCLUSION

In this paper Government project are discussed the services provided to the citizens. These projects are completely and some of them are partially successful in various states of India. Services are given to citizens so help to reduce the amount of people doesn't use digital technology. One of the major challenges to implement e-government in India is providing e-services to 70% of the Indian population that lives in rural areas.

India is one of the developing countries and will become superpower HUB in IT industry. Partitioning of citizens according to usage/ non-usage of ICT tools is termed as the digital divide. The advent of e-government is continually reducing the digital divide.

REFERENCES

- [1] Bhatnagar Subhash ,” Egovernment as a Tool for Improving Public Sector Performance”.
- [2] Dutta, Subrat. (2003) “Impact of Information Communication Technology on Society.” *Yojna*. 47, no. 7: 31–32.
- [3] Geetika, Pandey Neeraj (2007), National E-Governance Plan Revisited: Achievements and Road Ahead, in Foundations of E-Government, (ed.), Ashok Agarwal and V. Venkataraman, GIFT Publishing, Global Institute of Flexible System Management, New Delhi, India, pp. 86-94.
- [4] Geetika, Pandey Neeraj, “Strategic Marketing of E-Government for Technology Adoption Facilitation”, Available at http://www.csisigegov.org/critical_pdf/6_51-60.pdf accesses on 12 March 2011.
- [5] Gorla Narasimhaiah, (2008), Hurdles in rural e-government projects in India: lessons for developing countries, *Electronic Government*, An International Journal, Vol. 5, No. 1, 2008.
- [6] Haque Shamshul M. (2005), “E-governance in India: its impacts on relations among citizens, politicians and public servants”, available at <http://ras.sagepub.com/cgi/reprint/68/2/231.pdf> accessed on 7 March 2011.
- [7] Mahajan, Subrat. (2003), “Impact of Digital Divide on Developing Countries with Special Reference to India.” *SERALS Journal of Information Management*. 40, no. 4: 328–329.
- [8] Monga, A. (2008),” E-government in India: Opportunities and challenges”.
- [9] Raghunathan VS, Service and Payroll Administrative Repository for Kerala (SPARK).
- [10] Rao, Radha Krishna(2003), “E-Governance Gaining in Popularity.” *Kurukhetra*. 9: 12.
- [11] Saxena, K.B.C. (2005), ‘Towards excellence in e-governance’, *International Journal of Public Sector Management*, Volume 18(6), pp. 498-513.
- [12] <http://www.earnmoneyfromblogs.co.cc/2011/01/worlds-cheapest-sakshat-tablet-launched.html>.
- [13] http://www.worlib.org/vol17no1/singh_v17n1.shtml.
- [14] <http://www.gits4u.com/infotech/info2.htm>
- [15] http://www.nisg.org/knowledgecenter_docs/A05140001.pdf?PHPSESSID=72b4df7a02e7bd53a848f0886ef7e60e
- [16] http://en.wikipedia.org/wiki/Education_in_India
- [17] [http:// www.internetworldstats.com/stats3.htm](http://www.internetworldstats.com/stats3.htm) accesses on 18 March 2011