



Digital Divide and Digital Inclusive Policies in India: A Sociological Study

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ABSTRACT

The digital divide or digital split is a social issue referring to the differing amount of information between those who have access to internet and those who do not have access to the internet. The term assumes that such an access variance leads to social discrepancies owing to the alterations in the benefit conferred upon those who use this technology and those who do not use it.

Digital divide is not merely a concern for developing countries even it's a reality for developed countries of the world as well. This occurrence has been gaining attention worldwide for digitally enabled social policies and planning. The Indian government ambitious project, 'digital India', would be a reality only if it includes the neglected section of the society. The objectives of the paper are: a) to delineate digital divide in India and its concern & b) to ascertain the digital inclusive policies in India.

Keywords: *Digital divide, Digital opportunity initiatives, digital empowerment*

Introduction

Digital divide implies the gap among those who have access to digital technologies and those who do not have such access. The term assumes that such an access differential leads to social disparities owing to the differences in the benefit bestowed upon those who use this technology and those who do not use it. The term has gained significance as most nations around the world have started looking at this disparity as a hurdle to their overall economic progress. The

rising disparities arising out of this phenomenon have been gaining attention worldwide both amongst planners as well as critics (Swalehin, 2011, p. 181).

According to the United State National Telecommunication and Information Administration (NTIA), digital divide refers to the gap between those who do not and those who do have access to computers and the internet. During the process the notion of a digital divide and its logical implications, social problems can be addressed through provisions of computers and internet accounts have seemed increasingly problematic (<http://www.ntia.doc.gov/>). The difference is not necessarily determined by an access to internet, but by an access to ICTs (Information and Communication Technologies) and to media that the different segments of society can use. With regard to the internet, the access is only one aspect. Other factors such as the quality of connection and related services should be considered. The most discussed issue is the availability of an access at an affordable cost. There are various definitions of the term 'Digital Divide'. Bharat Mehra defines it as "the troubling gap between those who use computers and the internet and those who do not" (Bharat Mehra, http://www.wikipedia.org/Digital_divide). The term initially referred to gaps in the ownership of, or regular access to a computer. As Internet access came to be seen as a central aspect of computing, the term's usage shifted to computers but also access to the internet. Recently, some have used the term to refer to gaps in broadband networks access. The term can mean not only unequal access to computers hardware

but also inequalities between groups of people (http://en.wikipedia.org/wiki/Digital_divide).

In the early 1990's, Tim Bernes-Lee developed the global hypertext system, the World Wide Web, with an aim to provide a common space where information could be shared without barriers. The expansion of the Web may have surprised even its creator. In less than ten years, the online population has grown to 180 million individuals across all continents, while an estimated 250,000 sites are added to the Web each month (www.net-surfin.com/page4.htm). Rapid expansion is not unique to the Web. Computers, a strange word some fifty years ago, are now common household items and integral parts of educational systems in many countries. At the end of 1998, more than 40 percent of the households in the United States owned computers and one fourth had Internet access (NTIA, 1999).

The digital divide is becoming more and more conspicuous term in this IT world, the digital divide is not only confined to developed countries but now these days it is over phrased which is used in developing countries also. The digital divide is a term which was mostly used by the developed countries of the west, but now it is emerging in the developing countries also like in India and China. The Industrial Revolution divided the world into two large blocks, while the industrialized countries amassed significant wealth and power, those countries that were unable to change their pre-industrial forms of production experienced mounting economic and social problems. Starting in the industrialized countries, the ICT revolution seems to be perpetuating this divide (Swalehin, 2011, pp, 181-182).

The digital divide is also a concern for Indian society, as Indian society is highly divided and stratified one. In Indian society inequality is perpetuated from time immemorial, the distinction of caste, class and gender has generally persisted in determining the dispensation of the envisaged new social order, especially in rural areas. Many changes have taken places with the advent of Information Technological devices like radio, television; have helped immensely in spreading awareness among the marginalized sections regarding their rights. The access to internet is crucial in determining the equality in Indian society by fair access to the internet for all irrespective of gender, caste and class. But today our planner are apprehensive to introduce these technologies despite

various hurdles like lack of drinking water, electricity, poor health facilities, poverty etc., do not make it an easy choice for the government to invest heavily in the Information and Communication Technology sector (Swalehin, 2011, p. 181).

The number of internet users worldwide, is expected to touch 2.2 billion by 2013 and India is projected to have the third largest online population during the same time, says a report. "The number of people online around the world will grow more than 45% to 2.2 billion users by 2013 and Asia will continue to be the biggest internet growth engine." India will be the third largest internet user base by 2013 with China and US taking the first two spots, respectively, technology and market research firm Forrester Research said in a report. Globally there were about 1.5 billion internet users in the year 2008. Titled 'Global Online Population Forecast, 2008 to 2013', the report noted that emerging markets like India would see a growth of 10 to 20 % by 2013 (ToI, 2009, P. 1).

The regional digital divide is another concern in the developed as well as in developing countries. The regions have influence over the access to ICT and its benefit. The United Nations Development Programme Human Development Report 2001 indicates that in most countries, internet users are predominantly urban and located in certain regions. As so far in India, we have barely 30 million telephone connections and less than 4.5 million Internet connections for its 1000 million people. Most of these connections are confined to large cities (around 100 cities). India has a large number of rural villages that do not have telephone connectivity. Within India the digital divide between rural and urban India is rather large.

The developing country like China is also facing the same problem i.e. the regional digital divide. Eastern China has maintained the strongest Internet and other telecommunication networks, while West China, especially its rural areas, has the lack of internet connectivity and has weakest infrastructure. The CNNIC report in January 2004 showed that a higher penetration rate among Internet users is concentrated in major cities; the top is Beijing at a 28 percent, followed by Shanghai at 26.6 percent, Guangzhou at 14.4 percent, and Tianjin at 12.1 percent. In contrast, Western China represented a lower Internet penetration rate among the regional population, and

Yunnan, Qinghai, and Tibet have lower than 4 percent penetration rate (<http://www.tcomschool.edu/pdf/Shuho.pdf>).

Debate about the impact of rise of the information society has therefore produced deeply contested visions predicting the future direction of trends. Cyber-optimists hope that the development of the Internet has the capacity to reduce, although not wholly eradicate, traditional inequalities between information-rich and poor both between, and within, societies. In contrast, cyber-pessimists believe that the digital technologies will reinforce and exacerbate existing disparities. Cyber-skeptics suggest that both the fears and hopes are exaggerated, with technologies adapting to the social and political status quo, rather than vice versa. What evidence would help to settle these claims? It remains difficult to sort the facts from the hype, despite the burgeoning literature on all aspects of the Internet ranging from web design, software development and e-commerce to the sociology of the network society, group identities, and virtual culture. Studies in any discipline assessing the impact of the Internet face three main challenges: the problems of studying a phenomenon undergoing rapid change; the limitations of the available cross-cultural evidence allowing us to generalize beyond the experience of the United States; and the difficulties of developing and integrating triangulated methodologies drawn from different disciplines.

Although the term digital divide is a recent concept, it has emerged as the chief catalyst of the exponential development taking place in the realm of digital technology. From T.V and radio to telephones and computers, the role of the digital technology is tremendous. The digital revolutions stems from the spectacular progress that has been made in the area of microelectronics leading to the digitalization of images, sounds and data. With digitalization, the signals are coded into strings of binary numbers such as 0s and 1s, which then constitute a data processing, files.

The Internet is a network of interconnected computers across the world that enables worldwide communication and sharing of information. It is an anytime,-anywhere,-anything,-anybody, technology. The formal birth of the internet was begun when the internet society was chartered in 1992. In 1971 there were only 15 computer users who were connected to the Net, the number of internet rose rapidly to 407.1 million by November 2000. If 50 million is taken as a

measure of the number of users needed to make a technology ubiquitous, than the automobile took some 30 years to reach this level, and TV two decades. The Internet, however has taken only five years, and is well on its way to doubling that number in less than two years. It is this type of differential access to Information and Communication Technology that is at the root of the existing digital divide (Ernest, 2005, pp, 310-312).

Concerns of digital divide

Ever since Jean Jacques Rousseau in his magnum opus *The Social Contract and Discourse* pointed out the difference between natural and social inequalities (Beteille, 1977, pp. 3-4), sociologist have evinced more interest in the latter one. Social inequality stems from wealth, prestige and power in Indian society like other societies since time immemorial. Knowledge is an added dimension of source of social inequality in an era of Information and Communication Technology (ICT) and globalization. ICT is assumed to superimpose digital divide on the traditional one. C.E shannon has pointed out that information may be treated very much like a physical quantity, viz, mass or energy. In 1953, Daniel Bell predicted that information would succeed the raw materials, natural resources and energy as a commodity. It has taken many decades to realize that the new wealth is neither money nor power but information and knowledge (Shah, 1999).

Daniel Bell was amongst the first to talk of the emergence of an age characterized by heightened pressure and significance of information and knowledge. Though it is still difficult to think of a postindustrial society in case of India, where 75% of population still lives in villages and many people are not yet even touched by the information networks, one cannot deny the gradual but significant rise of such network (Deepak, 2006, pp, 7, 18-20).

Herbert Schiller in his studies expounds the way IT has evolved to cater the interest of corporate capitalists and how such technologies in return strengthen capitalism. According to him, the nature of information produced and disseminated is determined by market forces and is shaped by the needs of the corporate houses and governments, the main buyers of the information. The public in general, with its members accessing information as individuals, form the lower end of the market. What they get is rarely of

any value and use to them and has been termed dismissingly by Schiller as 'garbage information'.

Jurgen Habermas, on the other hand, fears the diminishing 'public sphere' in the society as the individual members of society hardly are able to participate meaningfully in the content of information and its spread. He finds the shrinking of 'public sphere' congruent with the rise in Privatization and withdrawal of the state from the public domain. Both the theorist indicates widening of the existing inequalities with the rise in information network that invariably favors the elite. This perspective would be helpful in understanding and analyzing the nature and content of the internet, especially in the light of unbridled Privatization and globalization (Fank, 2006, pp, 124-126, 155, 161-164, 167).

Manuel Castells published his book entitled "*The Information Age*" between 1996 and 1998. Manuel Castells' theory of network society provides a broader framework for the analyses of very diverse phenomenon ranging from globalization of production to renewable of democracy at the local level. Castells argues that the concepts of postindustrial society or information society are inadequate to frame the present. These concepts are replaced by the "network society". Castells' most important theoretical contribution is his analyses of the information of time and space. According to him, space is a product of society and space cannot be conceived without time. Their relationship is such that "space is the material support of time sharing social practices". He talks about the relationship of production; experience and power are material processes that relate people and things to one another in a historical specific ways. Castells concept of mode of development denotes the technological productions and he is opposed to mode of production, which is defined politically.

He identifies four major social groups which contribute in shaping the technologies. The first is "techno elite", the second is the group of 'hackers' which are characterized individually and creatively. The third is the virtual communitarians and the last is the global human culture that puts a high value in profit based on private property. Castells also talks about the 'The information technological paradigm'.

The first characteristics of the new paradigm are that information is its raw material. The second feature refers to the pervasiveness of effect of new technologies. The third refers to the networking logic of any system or set of relationship using these new

information technologies. Fourth related to the information technology paradigm is based on 'flexibility'. Finally, the fifth feature of this technological revolution is the growing convergence of specific technologies into a highly integrated system.

A bird's eye view on Indian society reveals that every one in ten urban Indian is now net connected. 70% of internet users reside outside metros. 70% of internet users prefer to access the net in Indian languages with English user having just 28% down from 41% in 2007. There are 49 million internet users in the country. Urban users account for a bulk of it 40 million, with rural net users numbering 9 million. Regular net user numbers around 35 million (30 million urban and 5 million rural). 77% users are between 19 to 35 years of age, up 10% from 2007. Women account for less than a fifth, just 17.6% of the million odd Indian net citizens. 51% in the country are a bulk of it 40 million, with rural net users numbering 9 million. Regular net user numbers around 35 million (30 million urban and 5 million rural). 77% users are between 19 to 35 years of age, up 10% from 2007. Women account for less than a fifth, just 17.6% of the million odd Indian net citizens. 51% in the country are salaried employed in corporate world. Thus, Indian society is also undergoing the process of digital divide. He also highlights the potential of Information Technology (IT) to widen the social inequalities along with the potential to exacerbate regional imbalances. He finds metropolitan cities around the world emerging as the nodal points of economic and political power. With their tendency to attract the most skilled professionals, these cities become island of prosperity surrounded by vast poverty and paucity. Moreover, within these cities the differences in life styles and life chances are striking. The rural urban divides and imbalances can be studied well in the light of these arguments.

Kenneth Keniston & Deepak Kumar (2004) analyze that in the last few decades, the world has begun to undergo, a new technology driven revolution, allegedly leading towards what is commonly called "The information Age". In this chapter of his book he has pointed out the four digital divides, which all are closely related. The first is internet, between the digitally empowered rich and the poor. This gap exists in both: the north as well as the south, although the baseline differs. The second linguistic cultural gap is large between English and other languages or more

generally between "Anglo-Saxon culture" and other world culture. The third is the gap exacerbated by disparities in access to Information Technology between rich and poor nations. Finally, there is the emergent intra national phenomenon of the "digerati" an affluent elite characterized by skills appropriate for information based industries and technologies, by growing affluence unrelated to the traditional sources of elite status, and by obsessive focus, especially among young people, on cutting edge technologies, regard for convention and authority, and indifferences to the values related to traditional hierarchies (Keniston, 2004, pp, 11-20).

Digital inclusive policies in India

One of the prime concerns of the governments in developed and developing worlds has always been to ensure the accessibility and availability of information and public services without much hassle. State governments in the country have been actively involved with several IT-oriented projects in an effort to bridge the digital divide, some of which are discussed as follows.

➤ **CARD Project**

The Computer Aided Administration of Registration Department (CARD) project initiated by the government of Andhra Pradesh illustrates the effective use of IT to improve citizen-government interface. Under this project, land registration offices throughout Andhra Pradesh are now provided with computerized counters. Citizens can now complete registration formalities without much hassle (Pannu, 2010, p. 107)

➤ **Sourkaryan and E-Seva**

One project of the government of Andhra Pradesh has been quite popular among the people. Sourkaryan, which is now operational in the port city of Visakhapatnam, provides the facility for a citizen to pay property taxes online and also view details of plans and projects of the government and local bodies. Similarly the E-SevaKendras in the Hyderabad state city is an innovative experiment towards eliminating personal contact between citizen and the bureaucracy. Here a citizen can pay sales taxes, insurance premiums, property taxes, land taxes, etc. Additionally, the government of Andhra Pradesh has formulated a prolonged strategy to further the prospect of e-governance in the state. In a major attempt to bring remote rural areas into the information technology fold, the first "Cyber

Grameen," a rural broadband venture, was started. This project has been launched by a non-governmental organization, "Swarn Bharat Trust," basically to set up IT convergence hubs in rural areas of the country. By harnessing the power of rural internet broadband the "Cyber Grameen" seeks to provide a range of applications and services to stimulate the rural economies. The services provided include telephony, telemedicine, distance learning, e-mail, digital entertainment, and delivery of government services and information (Pannu, 2010, pp, 107-108).

➤ **The Bhoomi Project**

The Bhoomi Project of Karnataka state covers 6.7 million farmers and holds millions of records of land ownership. The project has earned the goodwill of many people and also international funding agencies. This project has reduced the delays involved in interacting with the bureaucratic hierarchy of the state revenue department. Bhoomicentres are located all over the state. Any land record can be reviewed through a touch screen at these kiosks; the project can also be used as a databank for various projects of public and private sector organizations. The project has won the 2002 Commonwealth Association of Public Administration and Management award for creating "self-content governance and opening up new frontiers." Both the UNDP and the World Bank have lauded Bhoomi for bold vision and implementation. With the success of the Bhoomi project other states of India, viz. Tamil Nadu, Maharashtra and Madhya Pradesh have started evolving models based on Bhoomi in their respective states (Pannu, 2010, pp, 107-108).

➤ **The Gyandoot Project**

Gyandoot, which literally means "Knowledge Messenger," is the first ever project in India for a rural information network in the Dhar district of Madhya Pradesh which has the highest percentage of tribes and dense forest. Every village has a computer centre or "soochnalayas" at prominent market places or major roads. People can easily log in and complain or request information on crops, forest fields, water resources, etc. of the district. Twenty-one village Panchayats in the District have been connected with computers or information centres; several private sector information centres called "Soochnalays" have also been opened. One such popular centre is in "Manwar Agriculture Mandi," where the latest crop prices are made available to the farmers. The land

records of a few tehsils of district Dhar are also available on these computers. Also, Internet connections have been provided to get global information by linking to the World Wide Web. The government of Madhya Pradesh is attempting to make Gyandoot Project a great success by extending it to other districts.

The state is in the process of starting 7,800 IT kiosks with the help of the private sector. To train common people to be computer literate, 7,500 “Jan Shiksha” public instruction centres have also been identified, and policy is being formulated to bring IT to the common people’s need and benefit. Efforts are also being made by the government to involve public libraries in this project. In fact, public libraries can play a vital role in making the program successful by acting as information centres (soochnalayas) for the Gyandoot Project. For this to occur, a Public Libraries and Information Centers Act needs to be passed. Also, strong will and commitment among the professionals and policy-makers are required. It is expected that the Gyandoot Project will play an important role in bridging the digital divide between the urban and the rural people. The village people by virtue of their remoteness will no longer be technologically behind. The Project will be of great help to the farmers to get better crop yield by providing timely information to them. E-voice and e-chat will bring farmers and experts face-to-face to solve problems in agriculture and farming. This project has won international acclaim and the 2000 Stockholm challenge award for its imaginative approach to the problems of development and government at the root level (Pannu, 2010, pp, 107-108).

➤ **FRIENDS Project**

The Fast, Reliable, Instant Efficient Network for Disbursement of Services (FRIENDS) Project has been launched by the state of Kerala in the southern part of the country with a view toward mitigating the hardship of citizens paying taxes by eliminating middlemen, delays and long queues. Essentially, FRIENDS is a centralized collection counter which accepts almost all types of tax and utility payments. This project has expanded to serve 13 million people in 12 districts of Kerala. The basic philosophy of FRIENDS is to treat citizens as valued customers. Similarly in Tamil Nadu state a private outfit “N Lounge” offering low cost tele-solutions has worked wonders in Madurai districts by using the local loop technology and making available fibre optic lines

running across the district, by helping private entrepreneurs run services including that of e-governance (Pannu, 2010, pp, 107-108).

➤ **Lokamitra/Smart Project**

Himachal Pradesh (HP), the hill state of the country, has initiated the Lokamitra project with grants from NABARD to provide the general public, especially those living in distant rural areas, easy access to government information and facilities of e-governance to their door steps. Lokamitra “SoochnalayaKendras” (information centres) have been set up in 25 panchayat areas run by unemployed youth. These Kendras provide current information relating to the district and government information. The government of HP has also developed IT Vision 2010 in collaboration with NASSCOM (National Association of Software Companies) to convert the hill state into an IT destination and also make Simple-Moral-Accessible-Responsive and Transparent (SMART) Government (Neena Singh, <http://www.worlib.org/singh.shtml>).

Conclusion

The government must focus on digitally inclusive policies. The government of India has launched an ambitious project “digital India”. The imagination of digital India in information society would be a reality if the neglected section of society included in it. Using ICT for the empowerment of poor and lead them to the road of prosperity, Govt. policy should be poor-oriented rather than corporate-oriented that prevent many poor people from making use of ICT for their empowerment.

The discussion is based on information collected from various documentary sources, reports, and e-resources available to highlight the efforts made by the country towards bridging the gap between the “haves” and “have-nots” in remote and rural areas of the country. The discussion is based on the following relevant parameters:

- Growth and development of the information society.
- Initiatives, opportunities and prospects made towards bridging the digital divide
- The role of community information centres, government programs, libraries and institutions.

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