

## **BREAKING THROUGH THE INTERNET: REGIONAL AND SOCIO-ECONOMIC EFFECTS OF DIGITAL LITERACY IN SOUTH ASIA**

Shivraj Duggal

The Shri Ram School Mousari

### **ABSTRACT**

The role of the internet and its importance across the world, particularly in developing countries, has grown sharply in the past two decades, with many communities, businesses, industries, organizations, and even governments coming to rely on its potential for wide outreach and capacity to advanced networking, alongside the enabling of other processes and technologies for creating and managing services, analysing and collecting data, creating new methods of citizen empowerment, and empowering digital democracy through multiple forms. The importance of digital literacy, thus, has grown alongside this; yet education in information and communication technologies (ICTs) has not yet effectively seeped into different other classes and stratas of society -- it remains yet elusive to millions of people in lower classes, religions, castes, and furthermore the spread of ICTs is limited and slower in many underprivileged regions of South Asia and the world. This paper thus attempts to map the regional and socio-economic effects of digital literacy in South Asia, mapping multiple forms of the definition of the term, and considering cases and the evolution of ICT literacy in countries, taking an economic perspective towards reviewing its benefits.

**Keywords:** Regional and Socio-Economic, ICTs, Religions, Castes, Literacy

### **INTRODUCTION**

The role of the internet and its importance across the world, particularly in developing countries, has grown sharply in the past two decades, with many communities, businesses, industries, organizations, and even governments coming to rely on its potential for wide outreach and capacity for advanced networking, alongside the enabling of other processes and technologies for creating and managing services, analysing and collecting data, creating new methods of citizen empowerment, and empowering digital democracy through multiple forms (Bhatnagar, 2000). The importance of digital literacy, thus, has grown alongside this; yet education in information and communication technologies (ICTs) has not yet effectively seeped into different other

classes and stratas of society -- it remains yet elusive to millions of people in lower classes, religions, castes, and furthermore the spread of ICTs is limited and slower in many underprivileged regions of South Asia and the world (Bhatnagar, 2000). This paper thus attempts to map the regional and socio-economic effects of digital literacy in South Asia, mapping multiple forms of the definition of the term, and considering cases and the evolution of ICT literacy in countries, taking an economic perspective towards reviewing its benefits (Bhatnagar, 2000).

International communication policy debates emphasize that creating digital opportunities in the 21st century is not something that happens after addressing “core” development challenges, but rather a key component of addressing those challenges. In this context, the role and importance of information and communication technologies (ICTs) attracted the attention of the Indian government and the deployment of ICTs began as early as the 1970s (Vittal, 2001). In 1985, under the direction of Rajiv Gandhi’s, the Indian government decided to increase the pace of ICT use in the 1990s. The National Informatics Centres Network (NICNET) connected district-level and rural-level government offices to government secretariats in the state capitals and was in turn connected to the national network in New Delhi (Vittal, 2001). Enacted in 2000, the Information Technology (IT) Act provided legal recognition for digital signatures in transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as electronic commerce (Vittal, 2001). These involve the use of alternatives to paper-based methods of communication and the storage of information in order to facilitate the electronic filing of documents with government agencies (Bhatnagar, 2000). This policy was amended in the IT Policy (Amendment) Act of 2008 in which digital signatures are referred to as “electronic signatures.”(Vittal, 2001)

In the 1990s India began to apply several communication technology initiatives such as e-governance, telecommunication, telemedicine, e-commerce, and community information centers while promoting access to the Internet to bring economic benefits to the people (Vittal, 2001). The applications of ICTs for e-governance in rural development can be classified as those that 1) provide decision support to public administrators for improving planning and monitoring of developmental programs; 2) improve service to citizens and enable transparency; 3) empower citizens through access to information and knowledge; and 4) train developmental organizations to improve their functions and expand employment opportunities in rural areas (Bhatnagar, 2000).

## **BACKGROUND**

India's experience in e-governance/ICT rooted economic initiatives has demonstrated significant success in improving accessibility, cutting down costs, reducing corruption, and increasing access to unserved groups. Most of the state governments in India have approved e-governance initiatives through the use of ICTs and are in the process of enabling their citizens to use the Internet too. E-governance is viewed as ICT-enabled governance (Vittal, 2001). According to Bagga et al., "e-governance is government-to-people and people-to-government connections whereby citizens obtain direct access to records, rules and information about entitlements that they need or want in their daily lives... It also runs into strong resistance since disintermediation methods eliminate middlemen and others whose livelihoods and incomes depend upon the relative inaccessibility of government documents (Vittal, 2001)." The NeGP is a comprehensive program of the Government of India and is designed to leverage capabilities and opportunities presented by ICT to promote good governance across the country.

There has been thus recognized a digital divide in developing countries, especially South Asia. This has been defined in multiple ways including:

- The well-documented distance between the information rich and the information poor (<http://www.dcn.davis.ca.us/go/steve/terms.html>).
- The gap between the technology haves and have-nots (<http://www.youngaustralians.org/Resources/BYTE%20Audit%20Report/Glossary%20of%20Terms.htm>).
- The gap that exists between those who have and those who do not have access to technology (telephones, computers, Internet access) and related services (<http://www.contentbank.org/tools/glossary.asp>).
- The gap in opportunities experienced by those with limited accessibility to technology, especially the Internet. This includes accessibility limitations in social issues, cultural issues, disability issues, economic issues, learning issues, etc. (<http://www2.state.id.us/itrmc/pubs&resources/acronyms.htm>).

From the above definitions, the world can be divided into people who have and who do not have access to or capability to use modern artifacts, such as telephone, television, or the Internet; digital divide exists between those in cities and rural areas, educated and uneducated, economically well off and deprived classes; developed, developing and least developed countries (Vittal, 2001). The other observations that further help in explaining digital divide are: differences based on race, gender, geography, economic status and physical ability; in access to information, the Internet and other information technologies; in skills, knowledge and ability to use information and other technologies. Further, the stress is on access, knowledge and content.

Thus any endeavor to reduce digital divide should take care of these three aspects together (Vittal, 2001). Further, digital divide can be categorized as:

- (i) Global digital divide: This is the first divide where-in the Internet users account for only 6% of the world population and 85% of them are in the developed countries where 90% of the Internet hosts are located;
- (ii) Regional digital divide: Within Asia, 50% of South Korea is expected to be online by 2004, while Indonesia will be a mere 1%. India will be in between these two; and
- (iii) National digital divide: Within India, states such as Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh are more digital than Bihar and Uttar Pradesh and population proportion wise also the disparity is much wider. Also, within a state, there is an urban–rural digital divide; within urban, there is educated–uneducated digital divide; amongst educated there is rich–poor digital divide (Vittal, 2001).

The digital divide has severe implications on the society, if not addressed properly. The factors that have influence in addressing digital divide include: (i) Computer literacy: Those who can operate computers stand a better chance than those who cannot, though literate and otherwise competent, to get even a secretarial job let alone an administrative one. (ii) Use of electronic data interchange (EDI): An export company from a country that cannot use e-commerce over the Internet, may lose a large export order to another company from a different country that has collected more information through the Internet and submitted quotations through EDI. Singapore has announced that it will not trade with any company that cannot transact with it in paperless EDI mode over a computer network.

If many other countries follow the suite, it results in a Global digital divide. As a consequence, exports may grind to a halt for a country just because its companies cannot transact in EDI over a network. (iii) Tech savvy operations: Those who know how to operate automated teller machine can draw money faster and those who cannot operate need to spend more time at manual counters (Vittal, 2001). (iv) Use of information: The cruelest blow is inflicted because of urban–rural divide. It may be exploited by the unscrupulous because of information that urbanite may be privy to while others may not. (v) Working knowledge of English: Internet hosts more than 80% of the Web pages in English though only 54% of the Internet users are amongst English-speaking people (Vittal, 2001). In India and other developing countries, the disparity is much wider, resulting in a language divide.

## **DISCUSSION**

It is recognized that literacy, and a literate population, are keys not only to economic development but also to personal achievement and social well being everywhere. Many commentators and researchers have addressed this issue for last past half-century or more, but only recently have we begun to understand the importance of “beyond literacy” developments such as information literacy, digital literacy and complementary literacies. Figure 1 extends the literacy issue into the realms of information literacy and information literacy education. As Figure 1 suggests, poor overall education lies at the root of information illiteracy, but increasingly even such poor nations as Laos and Cambodia are able to provide at least basic education for their citizens, more so in urban areas than remote rural areas. Nevertheless, as the information literacy training funded by SIDA through the International Federation of Library Associations and Institutions (IFLA) (n.d.) Advancement of Development through Libraries (ALP) programme has shown, even in these situations where basic education is available information literacy is still, as one participant in Cambodia stated recently, “a new concept to us”.

The lack of knowledge and lack of awareness brought on in part by continuing information illiteracy affect all aspects of society, including such basic needs as health and nutrition, housing, clean water, a fair income, etc. Literacies defined Towards the end of the twentieth century the (principally Western) world was awash with great optimism about how the information highway (or information “superhighway” in the USA) would bridge the gap between “haves” and “have-nots”, about how a great egalitarian dream was about to be realised through the availability of technology for all citizens of the world. “But another metaphor, critical of the naïve optimism of the early years, did not take long to appear: that of the digital divide” (Fantin and Girardello, 2008). Indeed, this phenomenon of a divide between digitally enabled and digitally thwarted has continued to haunt us since its first recognition, and a definitive solution seems unlikely for some time to come.

This issue has been addressed provocatively by Cullen (2001) in Online Information Review, where enduring barriers to overcoming the divide, and possible solutions, are well articulated (Vittal, 2001). This is one perspective that informs this paper – that of a digital divide between citizens, whether of wealthy/poor nations, of literate/illiterate populations, or of urban educated/rural uneducated – or combinations thereof. What are the effects of this divide, and how might these be overcome, using the example of Pakistan or India or Bangladesh’s university sector? (Vittal, 2001)

## **CONCLUSION**

In the end, the professional and scholarly literature is replete with models, definitions, standards, policy statements and other matters concerning the digital divide, and information literacy and related literacies. It is definitions that we must first understand, as these lie behind the views articulated by all experts, most of whom are from developed, Northern Hemisphere nations. Among the most commonly employed definitions is that from the Association of College and Research Libraries (ACRL), which focuses on specific skill-based outcomes: “a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information” (ACRL, 2000). This is a common North American and European definition. Information and digital illiteracy constraints to development Information and digital literacy (Vittal, 2001) However, Dorner and Gorman (2006) take a critical view of this definition and emphasise that the Western or developed world’s definitions and models may not be operational in the developing world (Vittal, 2001).

They assert: There are serious shortcomings with the definition of information literacy when it is applied to developing countries. It tends to reduce the process to a group of “skill sets”, and more particularly reduces it to a functional technological skill. Further, it does not question the basic assumptions about information, and how it becomes knowledge, assuming the latter to be something external that can be tracked down and captured like small wild animals.

Ultimately, information literacy in developing countries in particular must involve the development of a capacity within local communities and local cultures to critique existing knowledge found by means of effective information literacy and to construct new knowledge on the basis of this critique (Dorner and Gorman, 2006). In view of these avowed shortcomings of traditional information literacy (IL) definitions, and since this paper deals with information and digital literacy (IDL) in developing countries, Dorner and Gorman’s operational definition of information literacy has been adopted; it is the ability of individuals or groups: a) to be aware of why, how and by whom information is created, communicated and controlled, and how it contributes to the construction of knowledge; b) to understand when information can be used to improve their daily living or to contribute to the resolution of needs related to specific situations, such as at work or school; c) to know how to locate information and to critique its relevance and appropriateness to their context; d) to understand how to integrate relevant and appropriate information with what they already know to construct new knowledge that increases their capacity to improve their daily living (Vittal, 2001).

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