



Role of Digital Divide in the effectiveness of e-Governance: A study on Rayagada District of Odisha.

Prof.Amiya Kumar Sahoo

Dept. Of Comp.Sc & Engineering, Gandhi Institute of Engineering & Technology, Gunupur

Dr.Dasarathi Sahu

Post Graduate Dept. Of Business Administration, Utkal University, Vani Vihar

Dr.Kshitish Kumar Khuntia

School of Management, Centurion University of Technology & Management, Bhubaneswar

ABSTRACT

India, being a developing country now heading towards digitization of all union and state government activities. In the process of digitalization a major hindrance is digital divide, which is now a global problem, in several counties including India. This paper focuses on how a government can work to raise the level of the citizens' IT-skills so that citizens can become an active part of the information society and hence grab the services provided by G2C(government to citizens). The focus is on how in the state of Odisha and especially in Rayagada which is a tribal dominating district (78% of the total population, of the district is tribal, 2011 census) the digital divide is the major issue in the effectiveness of e-governance and illiteracy is the major contributor for digital divide. The paper illustrates the gap between the current public initiatives and the theoretical understanding of the digital divide. This paper concludes with some new policy initiative proposals, which are targeted to resolve the digital divide and hence the effectiveness of e-governance.

KEYWORDS : Digital Divide, e-governance, Smart governance, G2C, ICT, Gender disparity, Caste disparities Literacy ratio

INTRODUCTION

Digital Divide:

Digital Divide is defined as by Cullen (2003:247) as the metaphor use to describe the perceived disadvantage of those who either are unable or do not choose to make use of ICT (information and communication technologies) in their daily life.

The Digital Divide Network (2004) defines the concept as the gap between those who have access to communication tools such as Internet and those who cannot.

Mariscal (2005: 410) defines the concept as the gap between individuals, households, business and geographic barriers at different socio-economic levels with regard both to their opportunities to access information technologies and to the use of such technologies for a wide variety of activities.

The digital divide is a global phenomenon. The gap between those who do and do not have access to computers and the Internet has become a political problem that has occurred as a consequence of the fast development of electronic governance (e-governance) (Warschauer 2003: 1). Today, public governance has to an increasing extent become electronic and online-based. Since the reorganization of the public sector in the 1980ies the ICT have been a determining factor (Jæger 2003: 1, 51).

On a global scale the size of the digital divide varies in every country. The extent every country focuses on solutions widely varies. It is a democratic problem that governments are developing fast towards e-governance, since a huge part of the citizens are thereby excluded and not able to participate in parts of society. The focus in this paper will be on the Odisha's digital divide with special focus to Rayagada district, placed in a national and International perspective.

E-Governance:

E-governance is the application of ICT to the process of governments functioning to bring about Simple Moral Accountable Responsive and Transparent (SMART) governance (Anju Gakkhar , Shivali 2005) that works better , costs less , and is capable of fulfilling the citizen's need as never before.

E-governance refers to the use of Information and Communication Technologies (ICTs) to improve the efficiency, effectiveness, operations, service delivery and accountability of government (The World Bank, 2006 as cited in Singh & Sahu, 2008; Kumar & Best, 2006; Kroukamp, 2005; Saxena, 2005; Turban et al, 2004). E-governance has evolved

an information-age model of governance that seeks to realize processes and structures for harnessing the potentialities of information and communication technologies (ICTs) (Saxena, 2005).

The objective of the study:

The objective of the study is to provide, how major part of the citizen is deprived of using ICT and Internet, which creates a clear cut **digital divide** in the society and hence the effectiveness of e-governance is not achieved as it was expected.

To analyze critically, how in India, and especially in Odisha, with respect to rayagada district, the government is engaged in e-governance in order to improve operations and service delivery for its citizens.

How e-governance will be use full as public sector's use of ICT with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective too.

The study will be done further by evaluating & analyzing different government web portals of union and state government departments.

Digital Divide and India:

Various studies (Huberman, 2001; DiMaggio et al, 2001; Guillen, 2006; Servon, 2002) showed that the problem of digital divide is starker in the developing countries like India. The gap of digital divide is significant between the rural and urban India (Dasgupta et al, 2002;, Nath, 2001; Singh, 2007; Mahajan, 2003; Dutta, 2003). The major metropolises are at par with some of the developed countries, eastern Bihar and Orissa are worse off than several of the least developed countries.

The problem can be more understood by studying it under three sub sections:

- Tele density divide,
- Mobile phone divide and
- Internet divide between rural and urban India

Out of the above the Internet divide is the main concern for success or effectiveness of e-governance in India

Internet Users in India (Rural and Urban)

Source : Internet and Mobile Association of India (IAMAI)



Despite of the above fact that more than 243 millions of internet users in India (as on June 2014) still the effectiveness of e-governance is yet to be improved.

Low literacy Ratio: Is the root cause of Digital Divide:

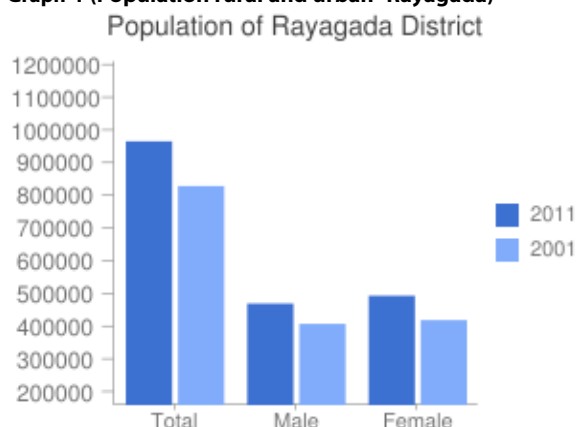
Literacy in India is a key for socio-economic progress, and the Indian literacy rate has grown to 74.04% (2011 census figure) from 12% at the end of British rule in 1947. Although this was a greater than six fold improvement, the level is well below the world average literacy rate of 84%, and of all nations, India currently has the largest illiterate population. There is a wide gender disparity in the literacy rate in India: effective literacy rates (age 7 and above) in 2011 were 82.14% for men and 65.46% for women.

The table shows the highest, the lowest and the position of Odisha in literacy chart in all 35 Indian states and union territories as per the census of 2011.

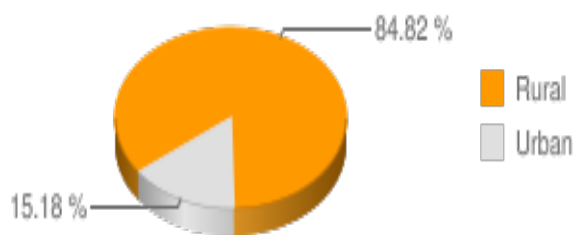
Table-1 (The highest, lowest and Odisha's position as per literacy ratio – Source Census Data - 2011)

Position of the state (Highest to Lowest)	State	Literacy Rate	Male Literacy Rate	Female Literacy Rate
1	Kerala	93.90%	96.00%	92.00%
25	Odisha	73.50%	82.40%	64.40%
35	Bihar	63.80%	73.50%	53.30%

Graph-1 (Population rural and urban- Rayagada)



Rural Urban Rayagada



Graph-2 (Population male and Female -Rayagada)

Table-2 (Population and literacy demographic data of Rayagada – Source Census Data - 2011)

Description		2011	2001
Population	Male	471,960	409,792
	Female	495,951	421,317
	Proportion to Orissa Population	2.31%	2.26%
	Urban	15.18%	
	Rural	84.82%	
	Sex Ratio (Per 1000)	1051	1028
Literacy	Male	61.04	48.18
	Female	39.19	24.56
	Average	49.76	36.15
	Urban Male	85.56%	
	Rural Male	56.16%	
	Urban Female	70.40%	
	Rural Female	33.54%	

Reasons for low literacy ratio:

- Lack of Proper School
- Inefficiency of teaching staff member.
- Low budgetary allocation to education

(education was never above 4.3% of the GDP from 1951 to 2002 despite the target of 6% by the Kothari commission. This further complicates the literacy problem in India)

Caste disparities (Discrimination of lower castes has resulted in high dropout rates and low enrollment rates. The National Sample Survey Organization and the National Family Health Survey collected data in India on the percentage of children completing primary school which are reported to be only 36.8% and 37.7% respectively)

Poverty (absolute poverty in India has also deterred the pursuit of formal education as education is not deemed of as the highest priority among the poor as compared to other basic necessities)

The **large proportion of illiterate females** is another reason for the low literacy rate in India. (Inequality based on gender differences resulted in female literacy rates being lower at 65.46% than that of their male counterparts at 82.14%. Due to strong stereotyping of female and male roles, Sons are thought of to be more useful and hence are educated. Females are pulled to help out on agricultural farms at home as they are increasingly replacing the males on such activities which require no formal education. Fewer than 2% of girls who engaged in agriculture work attended school.

Every issue that our society faces is like a link of a chain. Each issue is connected to another, either directly or indirectly. The chain of issues in this society that we live in, the strongest link of that chain is illiteracy. Illiteracy is the mother of all issues as it gives birth to many other issues like poverty, unemployment, child labor, female foeticide,

population burst and many more.

It is very hard to digest that the land of the Vedas is one of the countries with the highest illiteracy levels and shows the inability of our government to utilize programs like Sarva Shiksha Abhiyan and National Literacy Mission. Even countries like Sri Lanka, Myanmar, Vietnam, Thailand and the like have achieved, in lesser time, a much better percentage of literacy. Literacy is a reasonably good indicator of development in a society.

Even amongst the male and female population, there is a wide disparity in literacy. The male literacy rate is 75.96% and female literacy rate is 54.28%. The social system in India promotes education for the male gender while the female population, especially in the deep interiors of the country, is kept away from schools.

The Supreme Court in its 1993 ruling held that children had a fundamental right to free education. Former President Dr. A.P.J Abdul Kalam gave his assent to the Constitution (83rd Amendment) Bill, 2000, and the "right to education" was incorporated in the Constitution as a fundamental right. The country had failed to implement the provisions of Article 45, providing for compulsory and free education of children up to 14 years of age within 10 years from the commencement of the Constitution.

Digital Literacy and how to bridge the gap:

Bridging the digital divide is a term used widely, but is seldom defined. What exactly does it mean to achieve a high level of understanding about the Internet to every one? While affluent families have the time and resources to teach children about the Internet, India needs to provide for families with fewer resources. But what does "provide" demand? Libraries and schools combat the digital divide by providing free Internet access to all users. But how important is access and does it decrease the digital divide? Although people stress it as the key to bridging the digital divide, having access to the Internet is only one part, the crux of bridging the gap is educating Internet users.

According to the former president Dr. A.P.J Abdul Kalam's vision 2020, India must achieve 100% digital literacy before 2021. As per some estimates the computer literacy in India is just 6.5% and we still have less than 10% internet penetration.

If we look at the revolution in communication media in the past two decades, the entire world is gradually moving to digital communication **through mobile phones, computers, tablets, electronic mail, SMS, voice calls, Mobile Apps, and so on.** So today if we look at the percentage of cell phone/ smart phone users, we may have a better percentage of digitally literate people than those of traditionally literate. The challenge in such a scenario is, can the government redefine the definition of literacy? And, perhaps, announce that we are going to work towards not more literacy but only digital literacy

As per the view of Mr. Osama Manzar (founder director of Digital Empowerment Foundation and panel member of Internet governance at the ministry of communications and information technology) digital literacy can be achieved to a greater extent if following suggestions are taken care.

He said it may be a hugely challenging task to target 330 million without institutionalization of the movement while allocating budget, but we can achieve a huge digital literacy penetration if we target those sectors, who live in the shadow areas of digital revolution.

- Panchayats (local governing bodies) have three million elected members and almost all of them are digitally illiterate. Involving the Panchayatiraj ministry, they can be targeted through 250,000 gramsabhas (village councils)
- There are more than one million day-care (Anganwadi in Odisha) centers employing 1.8 million workers mostly women. The ministry of health and family welfare can take up the issue and facilitate digital literacy for all those women.
- There are NGO's who are involving around three million people in rural areas. The rural development ministry through its Council for Advancement of people's Action and Rural technology can

target those three million people.

- Nearly five million teachers in 1.5 million state-aided schools can be brought under the scheme by ministry of Human resources Development.
- Finally, 18.7 million government officials should be targeted to undergo rigorous training in Information and Communication Technology(ICT).
- State government of Odisha must continue the distribution of Laptops to rural and urban talented students passing high schools.

In addition to the above, every corporate houses and MNC's must be given target to make people digital literate around their periphery as the part of Corporate Social Responsibilities (CSR) activities.

Conclusion:

Through this paper we have attempted to investigate the relationship between the digital divide and e-governance as well as the current status of digital divide in India in general and Odisha in specific. The method used in this study was observation and content analysis of different government web-portals.

Today it is possible for these governments to perform real time transactions between the government and the citizens on the net.

To reduce the digital divide gap some steps has to be taken and some of them are as follows:

- Government need to provide more training to the digital illiterate citizens on, how to use ICTs to access e-governance services.
- To address the issue of human capital, competent staff members must be appointed to develop and maintain e-governance services.
- Telecom industries and ISPs must be involved in the process of improving the infrastructure.
- All government web-portals must be designed to support multi-lingual and also to support audio-visually challenged citizens by including pictorial and IVRS kind of systems.
- Government must allocate more funding on e-governance projects.

Many organizations today have misplaced their order of execution and priority. Without digitizing data available internally, these organizations have tried G2C systems and have failed.

Some more steps should undertake by Odisha state government and government supported agencies to improve the present scenario in e-governance. Some of them are as follows.

- The government must continue the distribution of laptops to rural and urban talented students passing high-school or intermediate, with a condition that they must educate at least one member from their own or neighboring family.
- Each district and local administration must enforce IT education as compulsory from primary school onwards.
- IT awareness programs / IT training must be conducted in a regular interval to make each citizen as digitally literate.
- In all government, public sector & private sector jobs a minimum IT skill certification test should be made mandatory.
- In jobs and job promotion priority must be given to those who are digitally more literate.
- Entrepreneurs must be given more government subsidy, who are setting up It training centers to train people in large scale.
- More rebate or discounts should be given on taxes, government transactions and bills paid through web-portals.
- The TRAI (Telecom Regulatory Authority of India) must regulate the tariff of internet accessing service charges billed by ISPs.
- The advertisement conceptualized by Idea Cellular, like IIN (Idea Internet Network) must be popularize to spread the message regarding the benefits of Internet and finally
- Citizens at large must be involved in planning and policy making through which the gap in digital divide can be minimized and hence the effectiveness of e-governance will achieved in true sense.