

## Digital Empowerment of Citizens in Rural India: Issues and Challenges

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***Abstract:** Digital India is the new mantra of the current central government of India. All the states and the union territories are also taking active part to make it a success and empower the citizens of the country to have access to information and computer technology (ICT) to get services in real time. The vision of Digital India has been centered on three key areas, one of which is digital empowerment of citizens of the country. Digital empowerment refers to the ability of an individual to use digital technologies. India being a geographically distributed country with large population living in rural areas along with many different languages spoken, the vision of digital India and digital empowerment may face many issues and challenges to get such a diverse nation on a single platform. Therefore, it is important to adopt different approach for each area and state. This review article is focused on the problems that can arise, especially in the rural areas of the country – which accounts for about 68% of total population of India. The study also proposed some measures to overcome such obstacles so that the process of digital India is smoothly implemented.*

**Keywords:** digital India, digital empowerment, citizen empowerment, e-governance

### 1. Introduction

Digital India has received a wide attention during the last couple of years. In 2006, the Department of Administrative Reforms and Public Grievances along with the Department of Electronics and Information Technology, framed the National e-Governance Plan (NeGP), providing the much needed boost to the e-governance program in India. The NeGP vision was to “Make all government services accessible to the common man in his locality through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man” ([www.deity.gov.in](http://www.deity.gov.in)). The government of India, during the first half of last decade, primarily focused on getting the official records and offices digitized. There were many schemes launched during the second half with mixed response and warm satisfaction level, which was primarily from the urban population. Now it intends to implement e-governance through Digital India by optimal use of digital channels available, particularly used for communication. The infrastructure created during the process will act as a backbone to provide and implement the scheme/ policies to be launched (or already done) by the government. It also has plans to empower its citizens with digital knowledge. The digital empowerment of citizens will enable the citizen of the country to fully participate in the Digital India movement. In this digital age, the citizens using online interactive services and schemes in a well-defined digital infrastructure, are the key to the health, prosperity, and the development of a nation. With the rapid growth and usage of internet and the benefits from it, the

developing countries around the world are concentrated on providing services through internet, so that, timely services can be provided to the masses with minimum efforts and higher satisfaction levels of the citizens can be achieved for the services delivered. India being a very diverse nation, many challenges are bound to arise and require deep understanding of the challenges which may occur at national, state, district and block levels. The biggest challenge lies ahead is to take the Digital India and e-Government initiative to the interiors of India where majority of population live, which is mostly deprived from the services and schemes offered by the central/state government ([www.censusindia.gov.in](http://www.censusindia.gov.in)).

### 2. Access to Information

Obtaining information has always been a challenge for the general public. In many cases, the government officials were not aware of the newly launched policies by the government or they paid little attention to the questions raised by the general public. No set procedure was in place/ followed to provide timely information. Due to lack of information, recording keeping and inter-department connectivity, getting the necessary services like ration card, passport, birth certificate, etc. was a daunting task. It uses to take days or even months to get a card/ certificate made. Couple of decades earlier, the information was limited to cities and town and the people in the rural areas were largely unaware of the new developments and policies launched by the government. Whatever information or policy benefit they use to receive were mostly tempered by the middlemen taking advantage of the system and lack of awareness on

the beneficiaries' part. The end users, especially in the rural and isolated areas, rarely had the control of information in their hand.

A major portion of Indian population lives in rural areas, with no formal education, lesser mode of communication and fewer job opportunities. According to 2011 Census, out of 481.7 million total workers, nearly 55% were engaged in agricultural activities and nearly 38 million were working as agricultural laborers ([www.censusindia.gov.in](http://www.censusindia.gov.in)). The relevance of digital India has less or no meanings to the agricultural laborers unless and until they are proactively involved in this program and are digitally empowered.

### 3. National Diversity

India is a very diverse nation in terms of geographical area, population, language, religion etc., so do their social status and economical condition. Some of the flourishing states have good infrastructure, villages connected via metaled roads, quality communication media, instrumental in implementing policies and schemes, well defined education and health system etc., whereas there are some states which have failed to create job opportunities, properly implement government schemes, create infrastructure and has lagged behind in taking the advantage of information and computer technology (ICT). Due to some of these facts, the per capita income widely varies from state to state and also the level of education. The per capita income of Indian states and union territories (UT) like Haryana, Goa, Maharashtra, Sikkim, Tamil Nadu, Chandigarh and Delhi is more than twice the states of Bihar, Uttar Pradesh, Jharkhand, Manipur and Assam. ([www.statisticetimes.com](http://www.statisticetimes.com)). Likewise, states like Kerala, Mizoram, Tripura and Goa has the highest number of educated population as compared to states of Bihar, Jharkhand and Arunachal Pradesh where the population is least educated among all the Indian states ([www.censusindia.gov.in](http://www.censusindia.gov.in)).

Thus, the Indian states and the UTs vary on many scales. In order to provide and bring them on the same peer level will be an uphill task. Policy implementation at the state level will also depend on the state government's will to understand and implement the Digital India package (Kumar and Best, 2007). This also co-relates with the issue of uneducated or hardly educated decision maker of a state. Any delay/lagging by the state government(s) in adopting to change, will result in a poor satisfactory level of the people especially in the interiors and the rural areas where the services take long to reach.

This huge difference on the level of literacy, education and per capita income also pose a challenge for digital India along with other parameter of prosperity of a state like health, transportation, employment etc.

### 4. Computer Literacy

Literacy Rate has been defined as the total percentage of the population of an area at a particular time aged seven years or above who can read and write with understanding (Park, 2007). According to the National Census 2011, the rural population constitutes 68.8% and urban population 31.2% of the total population and the literacy rate stands at 74% as compared to 64.8% in 2001 ([www.censusindia.gov.in](http://www.censusindia.gov.in)). Amongst the literate people, there is very little work done which can suggest the percentage of computer literacy among the citizens of the country. According to some surveys, less than 7% of population is computer literate and internet penetration was 18% in 2014 ([www.statista.com](http://www.statista.com)).

Indian techies are world renowned for their IT skills and the IT industry has boomed and has a presence on world map due to the skilled tech labors available in abundance. The growth rate of Indian IT service industry has grown 12% since the last fiscal year and has seen USD \$55 billion exports of the IT related services during this period (NASSCOM). The revenue of IT services has doubled during the last 5 years and India is playing a major role in world economy in terms of IT related services, but it has failed to spread its wings in the rural parts of India. People have largely been caught unaware of the advantages of IT and IT enabled services.

The above Para shows two different pictures of the same nation, which mean there is long way to go before people are fully digitally empowered and can actually fully utilize the benefits of Digital India and the e-Governance initiative of Government of India. This issue will take long to address and require a lot of time to achieve much higher rate of computer literacy. While working on this, it should be kept in mind that digital empowerment is not a direct consequence of having and using the technical facilities, but a multi-phased process to gain better networking, communication and cooperation opportunities, and to increase the competence of individuals and communities to act as influential participants in the information society (Makinen, 2006).

### 5. Digital Divide

Digital divide" has often been referred to internet access it is a divide that affects and reinforces fundamental economic and social divides between and within countries and is threatening to further exacerbate these inequalities (Singh, 2012). In a broader perspective, the digital divide is the gap between the population who has access to computer hardware, software and internet - compared to the population who can't afford these and have no access to ICT through public schemes. This gap also reflects the socio-economic condition of the people of a nation. This digital divide can be huge between the populations living in urban areas

compared to people living in rural areas and also a wider gap can be seen between the two genders. This divide also depends on income and level of education (Sciadas, 2002). As per a survey conducted in America, by January 2014, 87% of the adult population was using internet with an equal ratio from each sex. The more interesting fact was that the urban and rural population is almost on a par level in the use of internet, 88% and 83% respectively. In England, almost 90% of the population use internet with an average increase of 2% every year ([www.internetlivestats.com](http://www.internetlivestats.com)). Countries like Japan, Germany, Mexico, South Korea, Australia, Netherlands, Belgium, Sweden, UAE, Switzerland, Austria, Denmark, Finland and Norway have a very high percentage (more than 80%) of population using internet. Compare to these developed countries, India is lagging far behind with only 19% of its population using internet, this also carries hidden facts of digital divide between urban and rural population along with a gender base digital divide. These figures are also a reflection on the digitally empowered citizens of a country. Since the last decade or so, the government and the respective departments have taken initiatives to bridge this digital divide by rolling out schemes like Akshaya e-centres, Akashganga, Kissan Call Centres, Passenger Reservation System, Bhoomi, e-Tenders etc. The creation of ICT infrastructure and content are the core methodologies, and a national agenda on a C-8 thrust towards: connectivity provision, content creation, capacity augmentation, core technologies creation and exploitation, cost reduction, competence building, community participation and commitment to the deprived and disadvantaged would definitely help in bridging digital divide (SubbaRao, 2005). The government also plans to spend Rs. 50,000 Crore over a span of 5 years on Krishi Sinchai Yojna, e-Auction, Online marketplace etc. to help the farmers. But unless, the digital empowerment of citizens in rural area is not given high priority, the various schemes launch cannot obtain 100% user satisfactory level.

The digital divide is a major challenge for the government to tackle for the smooth implementation of e-Governance under the Digital India model. Low cost access to information is necessary so that it can reach the poor people of the country (Cecchini and Scott, 2010). People satisfaction level will always remain low unless the gap between technology savvy and computer illiterate is reduced to minimal, which again is a major issue in the digital India movement.

#### **6. Inadequate infrastructure and unskilled manpower**

Creation of infrastructure has always been a major challenge for a diverse nation like India. Being the second largest nation in terms of population and seventh largest according to geographical area i.e. India occupies 2.4% of the world's land area but

supports over 17.5% of the world's population, creating infrastructure for these many people is not an easy task. Providing necessary infrastructure like shelter, road, health, power, education, telecommunication, etc. has always been a challenge for a developing nation like India. These basic services/facilities have failed to reach the masses and people living in hilly areas, border areas and other isolated locations who are still waiting to take the advantage of ICT. One of the primary requirements for Digital India, ICT and digital empowerment of its citizens to take shape, is availability of power and electricity. Most of the infrastructure under these heads requires electricity to power the equipment involved. Although, as per data of 2011, 96.7% of the inhabited villages are electrified, but still 19,706 inhabited villages are without electricity ([www.cea.nic.in](http://www.cea.nic.in)). Unfortunately, successive governments have failed to match the ever increasing electricity needs of the nation. In 2012, the total primary energy production was 15.87 Quadrillion Btu as compared to 23.92 Quadrillion Btu required for same period ([www.eia.gov](http://www.eia.gov)). Desperate actions are required in this effect to meet the basic input required to meet the digital empowerment needs of the citizens and also to achieve the laid targets under digital India.

In rural areas, the Gram Panchayats and Gram Sabhas play a very important role in the decision making and uplifting the socio-economic status of people of a particular village. According to the official figures, there are 5,97,464 inhabited villages out of which 2,38,617 villages have Gram Panchayats in India ([www.panchayat.gov.in](http://www.panchayat.gov.in)). People enrolled/ elected to these groups should be literate and have a vision towards a bigger cause. To take the ICT to the grass-root level, the Ministry of Panchayat Raj has stressed upon the need to harness the potential of ICT tools for e-governance in Panchayats. Digital empowerment of these groups is still an issue which needs to be addressed more promptly. Once the Panchayats are digitally empowered, the affiliated members of the Panchayat can take advantage of facilities available at the local level.

High speed internet is still a distant dream in the rural and isolated areas of the country. Under the Digital India project, two pillars of this movement are Broadband Highways and Public Internet Access Programme which will cover 250000 Gram Panchayats and this task will be completed by December 2016. Again, keeping in mind all the constraints, the timeline looks very hypothetical and unrealistic and possess a challenge to the implementers of the Digital India drive.

Finally, with all the hype of digital empowerment, e-governance and digital India, the major input to this programme is the requirement of skilled manpower which will carry and implement this idea. This again highlights the need of computer literate population so that the skilled manpower can

further educate and help in the implementation of policies, services and provide necessary training and support for sustainable growth of ICT in rural areas. Most of the skilled manpower prefers to work in urban areas due to little opportunities for growth in rural areas. Here the issue of empowering rural population, specially the youths, with required digital skill set again can pose a major challenge in achieving the goals set under Digital India.

## 7. Conclusion

Digital empowerment of citizens of a nation can significantly contribute to the national development and is also important for the prosperity of the people. The government needs to carve policies to implement Digital India programmes depending on socio-economic status, literacy – particularly computer literacy, geographical divide, urban and rural population and available infrastructure. The Government of India, taking state governments in confidence, should formulate the plan to execute the schemes and policies in a better way so that the level of satisfaction (of the users and general

public), towards the services received, should be on a higher side. The government(s) should also try and evolve some mechanism to bridge the digital divide which is mostly and broadly a divide between rich and poor and also between urban and rural population. Ease of access to information can lead to better standard of living; improve health and quality education for which e-governance can play a major part in policy implementation. Moreover, the information should be available at low cost so that it can reach the poor people of the country. The issues and challenges arising from the digital empowerment of rural population needs a deep understanding so that the vision by which the government wants to implement its policies through Digital India should not face obstacles and the set target can be achieved within the given time frame. With the necessary infrastructure in place, computer literacy leads to use of internet, knowledge of accessing internet leads to gathering of information online and this knowledge and information combined with Digital India will eventually lead to digital empowerment of the citizens.

## References

- Buket Akkoyunlu, Meryem Yilmaz Soylu, & Mehmet Caglar (2010). A Study on Developing 'Digital Empowerment Scale' for University Students. *H. U. Journal of Education*.
- George Sciadras (2002). The Digital Divide in Canada. *Journal: Statistics Canada: Science, Innovation and Electronic Information Division*.
- Jhumur Ghosh (2014). Relevance and use of ICT in grassroots' participation in Panchayats. *Journal: Global Media Journal-Indian Edition*.
- Park K. (2007). *Preventive and Social Medicine*. (19th Ed.). Jabalpur: M/s Banarsidas Bhanot.
- Maarit Makinen (2006). Digital Empowerment as a Process for Enhancing Citizens' Participation. *Journal: E-Learning and Digital Media*.
- Rajendra Kumar & Michael L. Best (2007). Impact and Sustainability of E-Government Services in Developing Countries: Lessons Learned from Tamil Nadu, India. *Journal: Information Technologies & International Development*.
- Simone Cecchini & Christopher Scott (2003). Can information and communications technology applications contribute to poverty reduction? Lessons from rural India. *Journal: Information Technology for Development*.
- Singh K. (2012). Digital Divide factors in Indian management libraries. *Journal: International Journal of Advanced Research in IT and Engineering*.
- Siriginidi Subba Rao (2005). Bridging digital divide: Efforts in India. *Journal: Telematics and Informatics*.
- Central Electricity Authority, Ministry of Power, Government of India: [http://www.cea.nic.in/reports/monthly/dpd\\_div\\_rep/village\\_electrification.pdf](http://www.cea.nic.in/reports/monthly/dpd_div_rep/village_electrification.pdf). [accessed 5 June, 2015].
- Department of Electronics and Information Technology, Government of India: <http://deity.gov.in/content/national-e-governance-plan>. [accessed 25 February, 2015].
- Department of Electronics and Information Technology, Government of India: <http://www.digitalindia.gov.in/content/vision-and-vision-areas>. [accessed 12 February, 2015].
- Ministry of Panchayati Raj, Government of India: <http://www.panchayat.gov.in/documents>. [accessed 14 March, 2015].
- National Association of Software and Services Companies (NASSCOM): [www.nasscom.in](http://www.nasscom.in). [accessed 22 March, 2015].

Office of Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India:

<http://www.censusindia.gov.in/2011census>. [accessed 26 March, 2015].

U.S. Energy Information Administration (International Energy Statistics):

<http://www.eia.gov/beta/international/>. [accessed 11 April, 2015].

[http://www.censusindia.gov.in/2011census/PCA/PCA\\_Highlights/pca\\_highlights\\_file/India/4Executive\\_Summary.pdf](http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf). [accessed 26 March, 2015].

<http://www.internetlivestats.com/internet-users/>. [accessed 17 May, 2015].

<http://www.pewinternet.org/data-trend/internet-use/latest-stats/>. [accessed 28 June, 2015].

<http://www.statista.com/topics/2157/internet-usage-in-india/>. [accessed 09 July, 2015].

<http://www.statisticstimes.com/economy/gdp-capita-of-indian-states.php>. [accessed 16 July, 2015].