

# Digital Inclusion, Digital Behaviour and Digital Economy: A Synthesized View for India

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**Abstract:** *“In India, though steps in series form have been taken for digitalization mainly for government services, contemporary campaign i.e. Digital India launched on 1 July 2015 is aimed to create digital infrastructure to deliver services in digital way and impart also digital knowledge and to enjoy benefits of digital world. It is non debatable agreement that people must be aware and literate digitally to exchange services electronically. Moreover, digital behavior mainly depends on available digital infrastructure, level of digital awareness and literacy along with depth and patterns of digital divide and digital engagement and ultimately legal provisions regarding digital happenings particularly in case of our country. Resultantly, the level of digital inclusion and planning for making digital inclusion strategy are vital concern particularly for moving towards digital economy. Digital inclusion (DI) can be described as inclusion of digitally excluded people and integrated framework of DI includes digital opportunity, digital empowerment, digital*

*excellence and ultimately digital citizenship occupy central concern. Indian digital economy may initially be architected by creating and offering digital infrastructure, training and developing people in digital skills and more importantly over legal aspects to govern digital behavior of people. This attempt aims to underline the concepts relating to digital inclusion and digital behavior with regard to Indian scenario and provide a synthesized framework for the same.”*

*Key words: Digital Behavior, Digital Literacy, Digital India, Digital Economy*

## Introduction

Present scenario is the exchange of services be it financial, physical or human. Every one prefers quick service and this can only be accomplished effectively if information are readily available. In

India, though steps in series form have been taken for digitalization mainly for government services, contemporary campaign i.e. Digital India launched on 1 July 2015 is aimed to create digital infrastructure to deliver services in digital way and impart digital knowledge. Information technology initiatives of banks started with office computerization in 1990s (Mahapatra, 2016). Now banking services are enjoyed in digital way by Indian population.

Information communication and technology (ICT) has changed and still continuously forcing people for further development with more penetration in discrete manners. Today's world requires and coming time would certainly expect digital behavior among people as it seems to be a necessary part of their daily life.

It is non debatable that people must be aware and literate digitally to exchange services electronically. For this, efforts are being taken for shaping digital society and every strata of population needs to be well versed with digital knowledge which may fulfill the dream of sustainable digital economy in India. Of course big business players have already converted their mechanism in digital form to a great extent but still government departments and agencies/units are required to be provided in the same manner so that many issues related to services in physical form can be eliminated and a proper shift from

brick and mortar to digital can be achieved. In case of banking, customers demand instant, anytime and anywhere banking facilities (Mahapatra, 2016). The purpose of this paper is to underline the concepts relating to digital inclusion and digital behavior with regard to Indian scenario and provide a synthesized framework for the same.

### **Digital Inclusion and Digital Behaviour: Conceptual Framework<sup>1</sup> and India's Status**

Inclusion mainly focuses on excluded groups and also motivates for the inclusion of semi-included strata. In the same way, digital inclusion (DI) can be described as inclusion of digitally excluded people. There are various researchers and academicians who have nicely conceptualized and tried to define DI in different ways.

IMLS et al (2011) defined DI as "Digital inclusion is the ability of individuals and groups to access and use information and communication technologies. Digital inclusion encompasses not only access to internet but also the availability of hardware and software, relevant content and services and training for digital literacy skills required for effective use of

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<sup>1</sup> In this research attempt, the idea and crux have been taken from the studies of Ellen J. Helsper ( UK ) and Stephen Reder (USA) which are primarily on digital inclusion

information and communication and communication technologies.”

Helsper (2008) worked thoroughly on DI in the context of UK but the framework suggested by that investigator can be considered for emerging economies like India as penetration of ICT is continuously going in deep day by day. Helsper nicely explained DI and talked of four sections as digital resources in this regard such as ICT access, attitudes, skills and digital engagement. Under ICT, access, location, platforms were taken into view. Technical, critical, social and creative skills were said to be required skills while individuals' attitudes towards regulation and importance of ICT was described and considered. Further, the nature and extent of digital engagement, as per Helsper, were important aspects for DI .

According to Reder, people who have never used, are under the category – digital access and who so ever have used computer for a specific purpose are covered under digital taste. Under digital readiness, individuals who don't have or are lacking basic technology skills to use ICT and ultimately people who require these skills to solve problems in proficient manner are in the stage of digital literacy.

In 2015, Fletcher School of Tufts University and Mastercard have developed the [Digital Evolution](#)

[Index](#)<sup>2</sup> to examine and rate a country regarding digital evolution. For this, around 60 countries were taken and demand and supply conditions; Institutional environment; innovation and change are important factor which are considered to construct the said index . Recent report of 2017 on digital evolution index reveals status of different countries in four categories – stand out, stall out, break out and watch out countries in terms digital developments in those respective countries. As per report of Digital Planet 2017, any digital economy's competitiveness depends on present position of digital facilities and growth in that.

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<sup>2</sup> Please refer to Digital Planet 2017- How competitiveness and trust in digital economies vary across the world authored by Bhaskar Chakravorti and Ravi Shankar Chaturvedi (July 2017) working at The Fletcher School, Tufts University

**Table 1: Status of Countries in terms of Digitalization: Four Categories**

	High Momentum	Low/Slow Momentum
High Digital Advancement	<b>Stand out Countries</b> Singapore, UK, New Zealand, UAE, Israel etc.	<b>Stall out countries</b> Norway, Switzerland, USA, Canada, Germany, Sweden etc.
Low/Slow Digital Advancement	<b>Breakout countries</b> India, Poland, Mexico, Russia, China, Bangladesh etc.	<b>Watch out countries</b> Greece, Egypt, Pakistan, Spain, South Africa etc.

Source: Digital Planet 2017, The Fletcher School, Tufts University

Overall, as per Digital Evolution Index 2017, Norway is at top with the score of 3.79 and Bangladesh at last with 1.5 while India's rank is fifty third with score of 1.85 but lies in breakout basket which reveals appreciable position for digital happenings in the country. Among BRICS countries, all countries have high ranks as compare to India. Moreover, India is categorized as country having trust surplus state which reveals people do have trust and patient in digital system.

*Digital Behavior: Important Factors in Indian Scenario*

There are various aspects which frame digital behavior but in case of our nation we may confine only to three factors on which digital behavior of society greatly depend upon, level of

digital literacy and its means of leaning, laws to combat digital or cyber crimes or scams, and most important is morality and ethics in people towards to access and use digital information and resources. Following segment deals with these aspects of digital behavior:

As per National Digital Literacy Mission, digital literacy is the ability of individuals and communities to understand and use digital technologies for meaning actions within life situations. Moreover, it is complete of knowledge and skills for using digital technologies such as smart phones, laptops, PCs, tablets etc. for communication and expressions. It is ability of individual to use information technologies and internet for contents (Cornell University). Hence, use of computers and

electronic devices to get and utilize information is the subject matter of digital literacy. This is only possible when the required contents are available in digital version. Digitalization though Digital India is being done across the nation and people have started to avail the benefits of things so digitalized.

European Framework for Digital Literacy nicely defined it as

Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate analyze and synthesize digital resources, construct new knowledge, create media expressions and communicate with others, in the context of specific life situations in order to enable constructive social action and to reflect upon this process.

Another important aspect in India is cyber laws for digital happenings. IT Act 2000 is to deal with this issue even though people have insecurity in doing transactions and business activities online which demands for more robust legal lines to provide a safeguard. By doing digital trust can be ensured among people and institutions and also State. Information security and privacy are major concerns which need to be taken care in legal cyber framework. Perry4Law Organization also suggested cyber security infrastructure of India.

It shows cyber security should be ensured simultaneously when people are motivated for digital engagement.

The third aspect of digital behavior is ethical aspects which work to ensure sustainability in digitalization and digital benefits for people. As in India we are changing our print environment into digital environment through digitalization i.e. documents and information are now being provided to individuals, groups and institutions etc. in digital version. In this regard, it is important that digital information should not be shared and used without taking the approval of its owner or prepare or who has its copyright or patents.

Digital ethics can be understood through moral principles which govern conduct of people and even institutions for digital interaction (Research Firm Gartner). Hence these explain the acceptable digital behavior. Surely, laws and regulations can not inject real digital ethics in individuals. Hence digital ethics cover individual conduct, values and commitment manner regarding accessing, using and sharing digital resources.

### **Indian economy as digital economy: Government Initiatives**

Digital economy in narrow sense is that economy where transactions and payments are made through technologies. As initially it was defined by Don Tapscott (1995) and digital infrastructure and e-commerce activities decide ambit of digital economy. Since many efforts have been taken in connection to make India a digital economy, following are some recent initiatives,

- National e-Governance Plan
- Digital India
- Decision of Demonetization on 8<sup>th</sup> of November 2016
- Provisions in Union Budget 2017-18 such as promoting digital payments, Bharat Net Projects and Digi Gaon for villages connectivity, making of smart cards of senior citizens for their health status, SWAYAM as digital learning and literacy step and introduction on RAPID (Revenue, accountability, probity, information and digitalization) for tax assessment and deposit to State
- Smart cities

Central Government has initiated a unique type of programme at pan India level i.e. Digital India under Ministry of Electricity and Information Technology. In the comprehensive ambit of the programme, digital literacy is one of main focus areas of the government. National Digital

Literacy Mission (NDLM) is aimed to train and educate people how to use technology particularly mobile apps and tablets/PCs and use of internet for information. Its main focus of training is to make at least one person from family digitally literate. During its scheduled course, twenty hours are being devoted in the time frame of ten to thirty days depending on literacy level of the beneficiaries. Particularly, Pradhan Mantri Gramin Digital Saksharta Abhiyan is also meant to focus on to literate rural people regarding using various technological devices for their respective purposes specially for government services and facilities. Regarding digital literacy NDLM also provides a handbook in different languages available on its website.

Under Digital India initiatives, Indian Railways introduced new application for reserving tickets through mobiles. Soil health cards are being prepared for farmers and provisions to provide digital lockers to public are also part of Digital India. Pradhan Mantri Kaushal Vikas Yojana, Pradhan Mantri Jan Dhan Yojana and Direct Benefit Transfer are major schemes of Digital India programme.

Government has taken the help of various channels such as private sector partners, NGOs and public sector agencies to implement the programmes of NDLM. For reference, Digital



Empowerment Foundation (DEF) is one of the leading organizations working for disseminating the digital literacy to people. It was registered as NGO in 2002. It has worked a lot for digital literacy<sup>3</sup>. Moreover, various courses – digital literacy course, are also offered by National Institute of Electronics and Information Technology.

### Conclusion

In India, digitalization has been considered vital mechanism to develop the economy and enjoy its benefits by people in effective way. At government level, various programmes through different channels and agencies have been introduced to provide digital infrastructure and educate people for digital things. As discussed in this document, digital inclusion covers inclusion of people for the use of ICT technologies under the given framework of cyber laws and ethical code as well. That is why both concepts – digital inclusion and digital behavior are discussed here together so that academicians, researchers and policymakers etc of the area may do more work to improve the suggested aspects of digital inclusion and behavior which would ultimately be helpful to shape Indian economy in digital spectrum. Hence, digital citizenship is the need

<sup>3</sup> Please refer the website of Digital Empowerment Foundation for details of milestones.

of the time and we should come forward for being part of it, but at the same time, strict cyber and IT laws need to be implemented and followed so that the fruits of digital behavior can be enjoyed in sustainable way.

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