

## CONCEPTUAL UNDERSTANDING OF DIGITAL LITERACY: IN INDIA

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### ABSTRACT

During the 21st century developing nations underwent major changes in their social and economic structures as digital technology transformed into fundamental systems for governance administration, educational establishments and financial programs. The digital arrival of India faces significant literacy gaps even though the government implements large-scale programs for digitization. A study will then track the digital literacy revolution in India through the evaluation of government plans keeping in mind infrastructure development along with corporate collaborations for universal digital empowerment.

**Keywords:** India, Digital Literacy, E-Governance, Computer, Digital Technology, Digital financial inclusion

### INTRODUCTION

Digital technologies have revolutionized the way people interact with governance and economic systems and public service administration through all parts of the world. The digital divide gaining increased importance in India because of rapid growth in digital infrastructure as well as online service platforms. These digital expansion initiatives such as Digital India and Bharat Net Endeavour to develop a solid digital infrastructure however their distribution and utilization capabilities are not equitably spread throughout different population areas. The National Statistical Office (NSO, 2021) reports that Indians reach only a 32% level of digital literacy but urban population demonstrates superior digital skills compared to rural communities. Various elements including gender inequality along with insufficient infrastructure and security threats alongside social economic conditions automatically create these divisions.

As digital technology has per fused our lives, the idea of a new type of literacy has emerged: "digital literacy". Access to digital technology has increased our access to knowledge and information, but has also provided the opportunity to develop new pedagogies (Law et al., 2010). However, in order to effectively navigate the use of emerging technology and digital tools, learners need to develop a set of skills that enable the effective use of existing technologies and the ability to adapt to new digital tools.

Digital literacy isn't limited to skills needed to operate digital technology. These skills can also relate closely to critical medial literacy as well as social and civic consciousness. Developing digital literacy skills may help stoke civic interest and help support civic engagement in young adults (Martens & Hobbs, 2015). Digital technology changes the way individuals can engage with their society. While previously local civic issues were most salient, citizens now have the ability to engage in civic and social activity on a broader scale (Buchholz et al., 2020).

By fostering the development of digital literacy skills, educators are providing learners with a toolkit that will help them navigate a complex and changing world. Still, rapid technological and social changes, from the development of smart phones, and social media to social shifts

caused by the COVID-19 pandemic, have made it all the more important to understand the breadth of digital literacy skills that students need to develop.

As digital technology has become more common, affordable, and portable, more and more people from all parts of society are starting to increase their online and digital participation. Understanding the new opportunities, rules, and potential pitfalls of the digital world doesn't necessarily come automatically with long-term use. Not everyone using digital technology knows how to handle the range of available tools to their best extent, and even experienced digital technology users can fall prey to hackers, lose control of how they are represented online, or otherwise fail to maintain their digital identity in an optimal manner.

It is important to pause and note that the term literacy has always held a degree of status. Globally, countries are often ranked in terms of literacy rates, compared by what percent of the adult population can read and write, for example. There is more complexity to the terms literate or illiterate, however, and a lot depends on context. "New literacy studies" view literacy as a situated practice; as in it all depends on where you come from and what your purpose is. Much of what you find in your search will probably suggest a relationship between literacy and words. This may be attributed to the fact that the concept has traditionally been associated with language—i.e., alphabetic literacy. In popular use, the word literacy has increasingly become a synonym for skill, competence, and proficiency—for example, emotional literacy and spiritual literacy, etc.

Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs, and entrepreneurship. It includes competencies that are variously referred to as computer literacy

## CONCEPTUALIZING OF DIGITAL LITERACY

Digital literacy surpasses device operation skills to establish critical thinking abilities and responsible digital participation that happens through digital platforms. Professor Gilster (1997) developed digital literacy as an ability to manipulate different digital media while comprehending their content.

UNESCO (2018) explains that digital literacy involves safely and properly dealing with information through digital platforms by accessing it and managing it for understanding and integration and communication and creation. The framework simultaneously values critical thinking alongside digital ethics because these areas are highly important during contemporary times of misinformation spread and data security threats.

By defining digital literacy in India, the Ministry of Electronics and Information Technology (MeitY, 2020) has established it as the capability of people and communities to utilize digital technologies for government access and financial management and educational pursuits. The method supports the objectives of the Digital India campaign.

Definitions of digital literacy are still changing and emerging. Digital literacy may be seen as an evolution of media literacy adapted for the digital age. Within this context, the key aspects of digital literacy are underpinned by the ability to process media information and use these skills to participate in work and civic society (Martens & Hobbs, 2015).

**Digital literacy** is a relatively new concept that emerged in the 1990s during the era of the Internet revolution. Before that, people talked more about "computer literacy." But in 1997, Paul Gilster, a historian and educator first coined the term "digital literacy," arguing that

digital literacy went beyond just skills in using technology. He said it is about “mastering ideas, not [computer] keystrokes”

Gilster (1997) further defined digital literacy as “the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers” (p. 1). For him, digital literacy involves the ability to critically evaluate information (presented in different formats) and make decisions about how to use this information in different real-life contexts.

Dictionaries define literacy as the ability to read and write. Within education, literacy is understood as the ability to read, write, and use arithmetic; the emphasis is on proficiency with language and numeracy.

Whatever your view of the word literacy, what is less questioned is the relationship between literacy and technology. Until quite recently, literacy has, for the most part, been associated with print technology. The increasingly important role that digital technology has taken in shaping our world has led to another defining moment in the evolution of literacy.

Since the pioneering introduction of computers into education in the 1960s, four key concepts that have dominated the literature on literacy's related to digital technology include: information literacy, media literacy, computer literacy, and digital literacy (Brown, Czerniewicz, Huang & Mayisela, 2016). These four literacies are not competing, but in fact are necessary components of what it means to be literate in the twenty-first century. Different terms and how they intersect:

The view of digital literacy offered by Jisc (2015) is even more comprehensive, defining digital literacy as “the capabilities which fit someone for living, learning and working in a digital society”

The capabilities outlined by Jisc:

Information, media, data literacy (critical use);

Digital creation, scholarship and innovation (creative production);

Digital communication, collaboration and participation (participating);

Digital learning and personal/professional development (learning); and

Digital identity and wellbeing (self-actualising).

## **ACHIEVEMENTS OF DIGITAL LITERACY IN INDIA**

India has started its digital transformation through combined efforts of large-scale national programs and de-centralized state efforts and public-private partnerships. This section evaluates the major accomplishments which have improved digital literacy throughout the country through institutional work together with infrastructure development and education system advancement.

**Pradhan Mantri Gramin Digital Saksharta Abhiyan** (PMGDISHA) PMGDISHA launched its mission in 2017 by the Ministry of Electronics and Information Technology to teach digital literacy to rural household residents across India. During 2023 the training program reached 4.1 crore beneficiaries to master basic computer skills alongside internet usage and digital payment systems and online service operation (MeitY, 2023). PMGDISHA mainly helps rural residents with no technological background who reside in non-prosperous areas. The decentralized nature of this program makes it possible to implement through

Common Service Centres (CSCs) which operate training centres at the local level thus increasing efficiency and outreach.

**Common Service Centres (CSCs)** Common Service Centres serve as the foundation by which India distributes digital services across rural areas. Under the CSC-SPV (2022) over 4.2 lakh Common Service Centres throughout the nation enable people to receive telemedicine and e-learning features and access financial literacy courses and Aadhaar registration and online public service platforms. These centres act as both teaching centres with digital training facilities while also creating job opportunities in the nearby regions. CSCs advance the digital skills of users in vernacular languages through local trusted entrepreneurs to create well-being and empowerment especially for women and senior citizens.

**BharatNet** stand Infrastructure Development The broadband connectivity project BharatNet stands as one of the biggest worldwide rural networks which targets high-speed internet connections for 2.5 lakh village governance bodies. The Universal Service Obligation (USO) Segment of the Department of Telecommunications (DoT) revised the 1.7 lakh panchayats with optical fibre connectivity in 2022. The digital framework developed by the initiative creates essential prerequisites which support rural digital literacy programs. Bharat Net solution bridges last-mile connectivity gaps which enable rural facilities such as schools and health centres and government offices to work better and help link rural residents to digital national platforms

**State-Level Innovations** In India many states have initiated several measures to enhance digital literacy. The North Indian states have established individual programs to provide digital literacy at the regional level. The state of Kerala launched Akshaya Programme as an advanced large-scale e-literacy project to make the entire state digitally literate. The state of Rajasthan operates e-Mitra digital kiosks which provide government services in over 500 categories via training and awareness programs. Tamil Nadu implements e-District as a scheme that uses backend operations integration to produce a smooth e-governance approach (Kiran, 2022). These state-led initiatives help implement central schemes to show how adaptive governance enables the advancement of digital literacy.

**Digital Financial Literacy and Inclusion** Digital financial inclusion grows rapidly in India since the introduction of Jan Dhan Yojana and the implementation of Aadhaar-enabled Payment Systems as well as UPI platforms. These digital financial instruments make people less reliant on cash while demanding proper understanding of electronic payments. Citizens received valuable education about digital payments and cyber hygiene through national initiatives such as DigiDhan Abhiyan and Digital Saksharta Abhiyan (DISHA especially after the introduction of the 2016 demonetization policy according to (Verma and Singh, 2020)

**Women and Marginalized Group Outreach** PMGDISHA serves as a training program which specifically delivers digital instruction to women who belong to rural and Scheduled Tribe populations. The digital skill development participation rates for females increased substantially in Odisha and Jharkhand and Chhattisgarh because these states provided special outreach programs alongside safe learning spaces and additional benefits for trainer women (Amutha, 2022). These accomplishments demonstrate significant progress but additional effort remains essential to enhance digital policies through integrated approaches and sustainable practices and complete inclusivity. The following part discusses ongoing hurdles preventing universal digital literacy from becoming a reality in India.

**Challenges Of Digital Literacy In India** Although broad advancements have been made by extending digital networks and outreach initiatives India still encounters major hindrances in developing full-scale digital literacy. Multiple barriers stand in the way of achieving complete digital literacy because of the combination of socio-economic inequalities with infrastructure problems and cultural barriers and institutional barriers. The part reviews multiple complex barriers which prevent India from achieving digital empowerment.

**Digital Divide and Regional Inequalities** India maintains an extreme digital divide which separates rural areas from urban centres throughout the country. According to the NSO (2021) data, the urban population exceeds 60% internet access but only 25% or fewer rural households have online connectivity. The existing digital divide becomes worse because of differences in electrical connection access combined with expensive digital infrastructure and high Internet fees (Shetty, 2019). Social-economic segregation forms the base of the digital divide in addition to advanced technology gaps. Many remote locations throughout northeastern states and central Indian tribal regions alongside Himalayan hill areas find it difficult to enter digital education programs due to connectivity and logistical barriers.

**Gender and Social Disparities** The factor of gender remains among the primary causes behind digital exclusion for individuals. The social beliefs and security restrictions and accessibility barriers prevent women particularly in rural conservative areas from benefiting from digital tools and training programs (Verma and Singh, 2020). People belonging to Scheduled Castes and Scheduled Tribes and linguistic minorities share similar exclusion experiences because training sessions and content material are not available in their local dialects while also not matching their cultural background (Patel, 2018). There are insufficient female trainers and mentors in digital education environments which restricts female students from participating and staying in these learning spaces.

**Infrastructure Deficiencies and Connectivity Gaps** Rural connectivity suffers from three main problems: consistent power outages, limited bandwidth availability, and insufficient maintenance of infrastructure which BharatNet has established. The functioning of CSCs in numerous villages remains partial because of unreliable power supply and technical hardware problems. Community centres and schools do not possess essential digital equipment required for consistent internet education. These infrastructural deficiencies limit both access to digital resources and the motivation to engage with digital platforms.

**Cyber security Risks and Misinformation** Digital platforms have expanded so rapidly that they created new challenges about maintaining digital security and rebuilding trust. The number of online fraud attacks coupled with identity theft instances and phishing schemes and misinformation propaganda encounters greater frequency. The lack of awareness about digital safety protocols among new users exacerbates vulnerability (Amutha, 2022). Members of the elderly population and economically disadvantaged groups express mistrust in digital transactions because of psychological barriers they have developed

**Low Digital Literacy Among Bureaucracy and Service Providers** Achieving effective e-governance service delivery requires government staff members to demonstrate the same digital readiness as citizens need to possess. The lack of suitable digital expertise prevents panchayatlevel workers and government teachers from utilizing or promoting online services in multiple geographic areas (Kiran, 2022). The inability of public officials to carry out PMGDISHA and NDLM schemes results in their complete breakdown in the final stages of implementation. Institutional digital slowness creates delays for content updates and real-time grievance resolution instruments alongside translations of information.

**Short-Term Program Design and Lack of Monitoring** Digital literacy programs maintain short-term time limitations alongside weak inspection systems. Lack of post-training support along with refresher courses and extended digital mentoring programs characterizes the situation. Older adults tend to lose their newly learned digital skills after training programs because they receive no sustained engagement. Ground-level assessment becomes challenging due to insufficient real-time data transparency and lack of third-party audits which makes effective monitoring and correction of programs difficult.

## CONCLUSION

Digital literacy represents a fundamental requirement that supports both inclusive growth and participatory governance and democratic resilience in the 21st-century government of India. The vital national programs PMGDISHA, CSCs and BharatNet have established basic infrastructure yet multiple institutional and functional problems still require resolution. To unite these disconnects policymakers must develop an intervention which links liberal institutionalism to functionalist integration by organizing both top-level official coordination with grassroots community initiatives.

Multiple policy methods need implementation to achieve successful results. India should establish the National Digital Literacy Commission (NDLC) which would serve as a body that unites state departments with ministries to ensure equal distribution of digital resources by drawing guidance from various civil society groups and grassroots stakeholders. The training process needs to focus on developing localized multilingual education programs through audiovisual instructions and offline educational resources in tribal areas and underserved regions. The implementation of local digital support personnel functioning as ASHA members would guarantee ongoing digital outreach assistance. Through the frameworks of NEP 2020 and the Skill India initiative and Stand-Up India program the incorporation of digital literacy education will establish continuous digital expertise across generations.

The government should use incentives to motivate Public-Private Partnerships to establish mobile training facilities and broaden their reach into distant districts especially through Corporate Social Responsibility (CSR) initiatives. Education regarding digital safety and ethics needs to include practices of cyber hygiene together with focus on protection for users and ways to seek remedy. These instructions should be available in local languages. Real-time monitoring tools along with user-centered feedback systems offer transparency benefits which enable adaptive policymaking and track outcomes while increasing transparency. Digital literacy in India needs to be understood beyond technological requirements because it serves as a fundamental socio-political transformation objective. Active participation of communities alongside collaborative institutional systems will create a digitally empowered society based on national progress and trust and equity.

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