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Digital Literacy as the New Social Capital in India

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Abstract

Digital literacy has emerged as a vital form of social capital in contemporary India, shaping access to opportunities, governance, and empowerment. As the nation advances under the Digital India initiative, e-governance platforms have become central to delivering citizen-centric services, ranging from welfare schemes and land records to healthcare and education. Yet, the benefits of this transformation remain unevenly distributed across urban and rural populations. Urban citizens, supported by stronger infrastructure, higher literacy levels, and widespread smartphone penetration, have integrated digital tools into everyday life, using platforms such as DigiLocker, UMANG, and Aarogya Setu with relative ease. Rural communities, however, often remain dependent on intermediaries due to limited digital skills, weak institutional trust, and poor service quality.

This paper argues that digital literacy is not merely a technical competency but a new form of social capital—an intangible resource that determines confidence, participation, and trust in governance systems. Infrastructure alone cannot bridge the divide; citizens must be equipped with the knowledge and confidence to use digital platforms effectively. Successful models, such as Kerala's Akshaya Centres and Andhra Pradesh's e-Pragati, demonstrate how training programs and simplified service delivery can foster inclusion.

By situating rural challenges within the broader urban–rural framework, the study underscores that digital literacy now rivals education and financial capital in importance. Bridging this divide requires people-focused governance strategies—community training, vernacular interfaces, transparent grievance redressal, and trust-building measures. Recognizing digital literacy as social capital is essential for ensuring equitable, sustainable, and inclusive e-governance across India.

Keywords- Digital Literacy, Social Capital, E-Governance, Urban–Rural Divide, Institutional Trust, Digital Inclusion

Introduction

India's administrative and developmental landscape has been steadily embracing digital transformation as a pathway to efficiency, transparency, and citizen empowerment. The concept of e-governance—using information and communication technologies (ICTs) to deliver public services—was formally introduced

through the **National e-Governance Plan (NeGP)** in 2006, and later strengthened by the ambitious **Digital India program** in 2015. These initiatives envisioned a digitally empowered society where government services are accessible to every citizen, regardless of geography or socio-economic status.

In this evolving context, **digital literacy** has emerged as more than just a technical skill—it is increasingly recognized as a new form of **social capital**. Just as education and financial resources once determined opportunities, the ability to navigate digital platforms now shapes access to governance, employment, and social participation. Digital literacy empowers citizens to engage directly with e-governance systems, reduces dependency on intermediaries, and fosters confidence in institutional processes.

Yet, the reality of digital inclusion remains uneven. Urban India, with better infrastructure, higher literacy rates, and widespread smartphone penetration, has adapted quickly to digital platforms. Citizens in cities routinely use applications such as DigiLocker, UMANG, and Aarogya Setu. Rural India, however, continues to struggle with barriers such as poor connectivity, limited access to devices, low digital literacy, and weak trust in institutions.

This divide raises critical questions: Can technology alone ensure inclusion? Or does sustainable e-governance require human-centered strategies that build skills, confidence, and trust? This paper explores these questions by analyzing **digital literacy as social capital**, focusing on its role in bridging India's urban–rural divide. It synthesizes evidence from books, journal articles, government reports, and newspapers to propose actionable policy recommendations for inclusive governance and equitable digital empowerment.

Review of Literature

The idea of digital literacy as a form of social capital has been explored in depth by scholars and policymakers, though often framed within the broader discourse of e-governance and ICT adoption. B.K. Gairola's *E-Governance in India: Interlocking Systems* (2011) provides one of the earliest systematic accounts of how ICTs can transform administrative processes. He emphasizes that technology alone cannot deliver inclusion unless citizens are equipped with the skills to use it, foreshadowing the current emphasis on digital literacy as empowerment.

Pratap Bhanu Mehta's *Digital India: Governance and Technology* (2016) situates digital reforms within India's socio-political context. Mehta argues that while infrastructure expansion has been significant, the deeper challenge lies in ensuring that citizens—especially those in rural and marginalized communities—develop the confidence and trust to engage with digital systems. His work highlights digital literacy as a prerequisite for participatory governance.

S.R. Maheshwari's *Public Administration in the Digital Age* (2018) examines the bureaucratic challenges of adapting to technological change. He underscores that administrators themselves require digital literacy to effectively deliver services, suggesting that literacy functions as social capital not only for citizens but also for institutions.

R.K. Gupta's *Information Technology and Public Administration* (2019) focuses specifically on ICT adoption in rural governance. Gupta demonstrates how limited digital skills among rural populations perpetuate exclusion, even when infrastructure is available. He frames digital literacy as a resource that enhances trust, reduces dependency on intermediaries, and enables citizens to claim their rights.

Academic journals reinforce these perspectives. The *Indian Journal of Public Administration* (2019) analyzed rural exclusion caused by literacy and infrastructure deficits, while the *International Journal of E-Government Research* (2020) stressed that service quality and trust are as critical as connectivity. The *Economic and Political Weekly* (2018) offered lessons from Kerala's Akshaya Centres, showing how training and localized service delivery can empower rural citizens.

Popular media has echoed these concerns. *The Hindu* editorial (2021) argued that "Digital India Needs Human-Centric Governance," *India Today* (2022) highlighted why rural India still struggles with online services, and *Business Standard* (2023) described digital literacy as the "missing link" in e-governance. Together, these works converge on the idea that digital literacy is not merely a technical skill but a form of social capital—an intangible resource that determines confidence, participation, and trust in governance systems, and one that is essential for bridging India's urban–rural divide.

Research Gap

Although a considerable body of literature has examined e-governance and digital inclusion in India, much of the existing scholarship has focused primarily on infrastructure expansion, ICT adoption, and the efficiency of service delivery. Studies have highlighted the importance of internet penetration, device availability, and administrative reforms, but they often treat digital literacy as a secondary factor rather than the central determinant of inclusion. The framing of digital literacy as a form of social capital—an intangible resource that empowers citizens to participate confidently in governance, access opportunities, and build trust in institutions—remains underexplored. While some works acknowledge the role of skills and awareness, few systematically analyze how digital literacy functions as a social asset comparable to education or financial capital in shaping socio-economic outcomes. Moreover, existing research tends to emphasize rural exclusion without adequately situating it within the broader urban–rural continuum, where digital literacy also influences patterns of participation, trust, and empowerment in urban contexts. There is limited empirical investigation into how literacy interacts with institutional trust and service quality to determine adoption, nor is there sufficient focus on the cultural and social dimensions of digital literacy as a shared community resource. This gap underscores the need for a study that explicitly positions digital literacy as the new social capital in India, examining its role in bridging divides, fostering inclusion, and enabling sustainable e-governance.

Objectives of the Study

The primary objective of this study is to examine digital literacy as a new form of social capital in India and to analyze its role in shaping citizen participation in governance and access to opportunities. While infrastructure and connectivity remain important, this research seeks to highlight how digital literacy functions

as an intangible resource that empowers individuals socially, economically, and politically. Specifically, the study aims to explore how digital literacy enhances confidence, reduces dependency on intermediaries, and fosters trust in institutions. Another objective is to situate rural challenges within the broader urban–rural continuum, recognizing that digital literacy is equally significant in urban contexts where issues of cybersecurity, trust, and service quality also determine participation. By identifying gaps in current policy approaches, the study intends to propose actionable strategies—such as community-based training, vernacular service interfaces, and transparent grievance mechanisms—that can strengthen digital literacy as social capital and ensure inclusive e-governance across India.

Research Methodology

This study adopts a qualitative and analytical approach, relying primarily on secondary data drawn from government reports, national surveys, academic publications, and media sources. Key datasets include the National Sample Survey (NSSO), Telecom Regulatory Authority of India (TRAI) reports, and Ministry of Electronics and Information Technology (MeitY) documents, which provide insights into digital penetration, literacy levels, and adoption patterns. Scholarly works and journal articles are used to frame digital literacy within the concept of social capital, while case studies such as Kerala's Akshaya Centres and Andhra Pradesh's e-Pragati platform serve as practical examples of successful interventions. The methodology involves synthesizing these diverse sources to compare urban and rural experiences, highlighting differences in infrastructure, literacy, trust, and service quality. The analysis is interpretive, focusing on how digital literacy interacts with institutional trust and service delivery to influence citizen engagement. By combining theoretical perspectives with empirical evidence, the study aims to provide a comprehensive understanding of digital literacy as social capital and to generate policy recommendations that are both context-specific and scalable.

Digital Literacy, Institutional Trust, and the Urban–Rural Divide

The digital divide in India reflects not only infrastructural inequalities but also cultural, educational, and trust-based dimensions. Urban households enjoy internet penetration exceeding **70%** and widespread smartphone ownership, enabling direct access to applications such as UMANG, DigiLocker, and Aarogya Setu (TRAI, 2024). Higher literacy levels and exposure foster confidence in navigating digital platforms, with urban citizens increasingly adopting digital tools for everyday governance and documentation.

In contrast, rural households report only **~37% internet access**, with affordability of devices remaining a significant barrier. Many citizens rely on shared or community devices, and often depend on intermediaries such as Common Service Centres (CSCs) to access services like Aadhaar updates or pension schemes. While CSCs provide access, they also reinforce dependency, limiting true empowerment. Fear of technology and lack of awareness discourage independent use, with rural citizens frequently perceiving digital platforms as complex or unreliable.

Digital literacy, therefore, goes beyond technical skills—it encompasses confidence, awareness, and the ability to navigate online systems securely. The **National Sample Survey (2022)** found that only **25% of rural citizens felt confident using digital services independently**, preferring instead to rely on CSC operators even for simple tasks such as downloading certificates. This lack of confidence is compounded by a trust deficit. Surveys show that **54% of rural respondents doubt grievance redressal mechanisms online**, fearing fraud, corruption, or data misuse (DEF, 2024). Delays in pension disbursement through digital systems often reinforce this distrust.

Urban citizens, by contrast, demonstrate higher confidence and trust, widely adopting platforms like DigiLocker for storing documents. Yet even in cities, concerns about cybersecurity and data privacy persist, showing that institutional trust is a critical factor across contexts.

Together, these insights highlight that digital literacy as social capital is not merely about access to devices or connectivity. It is about building confidence, reducing dependency on intermediaries, and fostering trust in institutions. Without these human-centered dimensions, even available services remain underutilized, and the promise of inclusive e-governance cannot be fully realized.

Empirical Insights on Digital Literacy in India

Digital literacy in India is deeply uneven, reflecting socio-economic, geographic, and cultural divides. The Annual Status of Education Report (ASER) 2024, conducted by Pratham, surveyed 649,491 children across 17,997 villages in 605 rural districts. For the first time, ASER assessed digital access and skills among adolescents aged 14–16. The findings revealed that while over 70% of urban youth reported independent use of smartphones and online platforms, less than 30% of rural youth could confidently navigate digital tools without assistance. This demonstrates that infrastructure alone—such as internet connectivity or device availability—does not guarantee meaningful participation; literacy and confidence are the decisive factors.

Source: ASER Centre – ASER 2024 Report

The Telecom Regulatory Authority of India (TRAI, 2024) reported that internet penetration in rural areas remains at 37%, compared to 70% in urban regions. Yet, despite this expansion of connectivity, the National Digital Literacy Mission (NDLM) data available on the Open Government Data (OGD) Platform India shows that while millions of rural citizens have been enrolled in training programs, completion rates and confidence levels remain low. This suggests that digital literacy must be understood not only as technical know-how but also as a social resource that enables trust, participation, and empowerment.

Source: TRAI Reports | Open Government Data – NDLM

The Digital Empowerment Foundation (DEF, 2024) stresses that rural citizens often lack "critical digital literacy"—the ability to evaluate information, protect privacy, and trust online systems. This perpetuates dependency on intermediaries such as Common Service Centres (CSCs), which provide access but limit empowerment. Urban India, while more advanced in adoption, faces challenges of cybersecurity awareness,

data privacy, and institutional trust deficits, showing that digital literacy as social capital is relevant across both contexts.

Source: Digital Empowerment Foundation

Importantly, the divide is not only geographic but also gendered. Women in rural areas face double exclusion due to lower literacy levels and cultural barriers. DEF's field studies in Rajasthan and Bihar show that women often rely on male family members to access digital services, limiting their autonomy and reinforcing dependency. At the same time, youth potential offers a pathway forward. ASER 2024 noted that rural adolescents, even with minimal prior exposure, could quickly learn digital tasks when trained, suggesting that rural youth can act as "digital ambassadors" within their communities. Finally, digital literacy has broader implications for sustainability. By enabling inclusive participation, digital inclusion contributes directly to the UN Sustainable Development Goals (SDGs), particularly Goal 9 (Industry, Innovation, Infrastructure) and Goal 16 (Peace, Justice, Strong Institutions), positioning India's digital transformation as both a national and global priority.

Strategic Recommendations for Inclusive Digital Literacy

Strengthening digital literacy as social capital requires governance strategies that prioritize skills, confidence, and trust alongside infrastructure expansion. Kerala's *Akshaya Centres* have shown how combining service delivery with digital education can empower citizens, and similar models should be scaled nationwide with special focus on women, elderly citizens, and marginalized groups to address gendered exclusion. Andhra Pradesh's *e-Pragati* platform demonstrates how simplified service delivery in local languages can increase adoption, underscoring the need for vernacular interfaces and intuitive navigation for first-generation digital users.

Trust-building mechanisms are equally critical. Surveys show that over 50% of rural respondents hesitate to use online grievance portals due to distrust in institutional responsiveness, highlighting the need for transparent grievance redressal systems and awareness campaigns. Embedding digital literacy into school curricula nationwide is also vital. With 24.69 crore students enrolled across 14.71 lakh schools (UDISE+ 2024–25), integrating digital skills into education can create a generational shift in literacy and confidence.

Source: UDISE+ 2024–25 Report

Regular audits of CSCs and e-governance portals should be conducted to ensure responsiveness, reliability, and citizen satisfaction. Public–private partnerships can further scale outreach, as demonstrated by DEF's initiatives in Rajasthan and Madhya Pradesh, which effectively expanded literacy programs and built community trust. By leveraging youth as digital ambassadors, addressing gender barriers, and aligning with SDGs, India can transform digital literacy into a sustainable form of social capital that empowers citizens across all regions.

Comparative Insights on Urban–Rural Digital Literacy

The comparative indicators of digital literacy in India highlight stark contrasts between urban and rural contexts. According to the **Telecom Regulatory Authority of India (TRAI, 2024)**, internet penetration in urban households is close to **70%**, while rural households lag at around **37%** (TRAI). Similarly, the **Annual Status of Education Report (ASER 2024)** found that **over 70% of urban youth aged 14–16** reported independent use of smartphones and online platforms, compared to **less than 30% of rural youth**, who often required assistance to navigate digital tools (ASER Centre).

This divide is compounded by differences in training outcomes. Data from the **National Digital Literacy Mission (NDLM)** shows that while millions of rural citizens have been enrolled in digital literacy programs, completion rates remain low, and confidence in using digital platforms is limited (Open Government Data – NDLM). In contrast, urban India demonstrates higher completion rates and greater integration of digital skills into everyday life.

The **gender dimension** adds another layer of exclusion. Field studies by the **Digital Empowerment Foundation (DEF, 2024)** reveal that women in rural areas face double barriers: lower literacy levels and cultural restrictions that limit independent digital use. Many women rely on male family members to access services, reinforcing dependency (DEF India). At the same time, **youth potential** offers a promising pathway forward. ASER 2024 noted that rural adolescents, even with minimal prior exposure, could quickly learn digital tasks when trained, suggesting that youth can act as "digital ambassadors" within their communities.

Trust in institutions also plays a critical role. DEF surveys show that **over 50% of rural respondents hesitate to use online grievance portals** due to distrust in institutional responsiveness. Urban citizens, while more digitally active, continue to express concerns about **cybersecurity and data privacy**, indicating that literacy must encompass not only technical skills but also awareness and confidence in secure digital practices.

Finally, digital literacy contributes directly to **sustainability goals**. By enabling inclusive participation, digital inclusion advances the **UN Sustainable Development Goals (SDGs)**, particularly **Goal 9 (Industry, Innovation, Infrastructure)** and **Goal 16 (Peace, Justice, Strong Institutions)** (UN SDGs). Thus, India's digital transformation is not only a national priority but also a global commitment to equitable and sustainable development.

Conclusion

The trajectory of India's digital transformation demonstrates that access to infrastructure alone cannot guarantee inclusion; rather, it is digital literacy—conceived as a form of social capital—that determines the extent to which citizens can participate meaningfully in governance, education, and economic life. The evidence from ASER 2024, TRAI reports, NDLM datasets, and DEF field studies underscores that literacy is not merely technical proficiency but a composite of confidence, trust, and critical awareness. It is this intangible resource that enables individuals to move beyond dependency on intermediaries and to claim their rights as empowered digital citizens.

The analysis reveals persistent disparities across urban and rural contexts, with rural households facing lower penetration, weaker confidence, and pronounced gender barriers. Women in particular experience double exclusion, while rural youth, with their adaptability, represent untapped potential as community-level digital ambassadors. These findings situate digital literacy within broader developmental frameworks, linking it directly to the achievement of the UN Sustainable Development Goals, especially Goal 9 (Industry, Innovation, Infrastructure) and Goal 16 (Peace, Justice, Strong Institutions).

Thus, digital literacy must be treated as a strategic national priority, comparable to education or financial capital, and embedded within policies that emphasize skill-building, trust, and inclusivity. By investing in community-based training, vernacular interfaces, and institutional transparency, India can transform digital literacy into a sustainable form of social capital. In doing so, the country not only bridges its urban–rural divide but also strengthens democratic participation, fosters equitable growth, and advances its global commitments to sustainable development.

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