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DIGITAL LITERACY AND THE LAW: ANALYZING THE RIGHTS, RESPONSIBILITIES AND CHALLENGES IN THE DIGITAL AGE

By Prof. *Dr. Lakshmi Chand Sahu*
Dean, *BKD College.*

By *Vanshika Premani*
Research Scholar*, Bundelkhand University*

Abstract
In an age marked by rapid technological advancement and increasing reliance on the digital sphere, it has become imperative to holistically understand and critically examine the digital ecosystem. This entails not only recognizing the rights embedded within the digital domain but also identifying the emerging challenges and vulnerabilities that accompany technological growth. The digital world has, in many ways, empowered individuals, granting them unprecedented access to information, opportunities, and connectivity. However, with this empowerment comes a parallel responsibility to navigate and manage these digital tools wisely, ensuring a balanced and ethical digital experience.

This article primarily focuses on the pressing issues of the digital divide and the framework surrounding digital literacy. The disparity in digital knowledge and access among various social and economic groups stems from multiple complex factors and has become a significant barrier for those adversely affected by this gap.

From a legal perspective, the discussion will encompass the current legal framework that governs digital literacy, evaluating its effectiveness and its implications for marginalized communities. The article will further delve into the question of social justice in digital access and literacy. Additionally, it will explore the legal and ethical responsibilities of key stakeholders, including educators, policymakers, and technology providers, in promoting an inclusive and equitable digital environment. Addressing the multifaceted challenges that hinder digital literacy will be essential in fostering a more informed and digitally empowered society.

Keywords: digital literacy, digital divide, law, society, social justice, marginalized society

Introduction

Across the globe, digital technology has transformed how people interact with government and economic systems. In India, however, this rapid digital progress has also highlighted a persistent 'digital divide' which indicates the gap between those with access to modern ICT services and those without.[1]

The problem arises when the various initiatives that have taken place in technological expansion, like for instance Digital India, BharatNet, etc, are not equitably distributed across different parts of the country, even though the objective of such initiatives is to build a robust digital ecosystem. This in turn affects the consumption effectiveness of such initiatives.[2]

According to NSS data 78th round (2020-2021), Computer literacy rate has been (ages 15+): 24.7%.[3] Urban residents tend to have markedly better digital skills than rural residents.[4] There has been an increase in rural areas from 11-1% to 18.1% and in urban areas

[1]Dr. Manoj Kumar Nag and Mr. Upesh Kumar Meher, "Digital Literacy in India: Achievements and Challenges" 13 *International Journal of Creative Research Thoughts* 823 (2025), available at https://www.ijcrt.org/papers/IJCRT25A4851.pdf (last visited Sept5. 25, 2025).
[2]*Ibid.*
[3] "Digital Literacy in India," *Navigator* (5 July 2024), available at https://navigator.narayanaiasacademy.com/current-affairs/2024-07-04/Digital-Literacy-in-India (last visited on Sept. 27, 2025).
[4]*supra*1.

from 34.7% to 39.6%.[5] However, this result shows poor results in two regards: one this increase is not sufficient to cater to the national expectation in digital literacy and second the gap in the literacy rates in rural and urban areas.

Factors like gender gaps, inadequate infrastructure, safety issues, and socio-economic disparities all contribute to this digital divide.[6] Digital literacy today means more than just knowing how to use technology. It includes the ability to access, use, and benefit from digital platforms for personal growth, job opportunities, and participating in society. However, when digital literacy programs are introduced at the local level, they often face problems like limited reach, lack of access for all, and long-term sustainability.[7]

Digital transformation has quickly grown across many fields such as business[8] , healthcare[9], education[10], government services[11], and jobs[12].
Digital literacy is important for people to fully take part in today's society. It is not just about using technology, but also about knowing how to protect personal data and find reliable information online. However, many current policies focus more on building digital infrastructure than on teaching digital skills. This creates risks and leaves people more exposed online. To reduce this digital divide and make sure everyone can benefit equally, we need strong laws and a clear focus on digital education.
The aim of the study is:

- To understand what digital literacy means and why it is important in India.
- To review the main digital literacy programs run by the central and state governments.
- To look at the major results and improvements made through these programs.
- To find out the ongoing social, technical
- , and structural problems that still exist.
- To suggest practical steps that can help increase digital access and empower more people

These focus areas in this paper shall be explained by discussing the Indian Law and its challenges. There shall be discussion of the relevant case laws. Those studies that are specific to the area of digital literacy shall be taken into consideration to properly analyze the research topic. Study shall also be made relating to the digital literacy initiatives and how and to what

[5] *supra*3.
[6] Cristian Barra, Mara Grimaldi, Amina Mazzam, Orlando Troisi and Anna Visvizi, "Digital divide, gender gap, and entrepreneurial orientation: How to foster technology adoption among Pakistani higher education students?" *Socio-Economic Planning Sciences* 93 (2024), available at: https://www.sciencedirect.com/science/article/pii/S0038012124001034 (last visited Sept. 24, 2025).
[7] Dr. Manoj Kumar Nag and Mr. Upesh Kumar Meher, "Digital Literacy in India: Achievements and Challenges" 13 *International Journal of Creative Research Thoughts* 823-24 (2025), available at https://www.ijcrt.org/papers/IJCRT25A4851.pdf (last visited Sept5. 25, 2025).
[8] H.A. Mashalah, E Hassini, A. Gunasekaran and D. Bhatt (Mishra), "The impact of digital transformation on supply chains through e-commerce: Literature review and a conceptual framework" *Transportation Research Part E: Logistics and Transportation Review* (2022) [DOI: 10.1016/j.tre.2022.102837].
[9] Francesca Dal Mas, Maurizio Massaro, Pierluigi Rippa and Guistina Secundo, "The challenges of digital transformation in healthcare: An interdisciplinary literature review, framework, and future research agenda", 123 *Technovation* (2023) [DOI: 10.1016/j.technovation.2023.102716].
[10] E Mukul, G Büyüközkan, "Digital transformation in education: A systematic review of education 4.0" *Technological Forecasting and Social Change* (2023) [DOI: 10.1016/j.techfore.2023.122664].
[11] Elena Dobrolyubova, "Measuring outcomes of digital transformation in public administration: Literature review and possible steps forward", 14(1)*NISPAcee Journal of Public Administration and Policy* 61-86 (2021) [DOI: 10.2478/nispa-2021-0003].
[12] C. Blanka, B. Krumay, D. Rueckel, "The interplay of digital transformation and employee competency: A design science approach", 178 *Technological Forecasting and Social Change* 121-575 (2022) [DOI: 10.1016/j.techfore.2022.121575].

extent have they impacted individuals and communities. Overall, this paper shall discuss about the issue and the author shall give suggestions and policy recommendations that can be undertaken for the effective implementation of digital literacy in India.

Meaning and Concept

The digital divide is a complex issue that goes beyond just having or not having internet access. It reflects ongoing social and economic inequalities, rather than being a completely new form of exclusion. This gap often affects the same groups that have always faced disadvantages, limiting their access to digital tools and opportunities. It follows old patterns of inequality, but now uses modern ways to measure it such as internet speed, data limits, and access to devices instead of older signs of social status.[13]

The 'digital divide' is not a brand-new type of inequality; it largely mirrors long-standing social and economic gaps. In essence, the same populations historically left behind (due to poverty, education, gender, etc.) often lack equal access to the internet today. The divide is not only about whether one can get online or not; it also includes differences in connection quality (like high-speed vs. slow internet) and in the ability to use devices and digital tools effectively.[14]

Today, the digital divide is often explained in three levels[15]:

1. Access to digital tools (first level),
2. Ability to use them and apply digital skills (second level),
3. The real benefits people get from using technology (third level).

First Level

The term *digital divide* is often used to describe the gap between people who can use information and communication technologies (ICTs) and those who cannot. Initially, the digital divide was understood simply as an **access gap**, essentially a yes/no divide between people who could get online and those who could not.[16] In the 1990s, this meant society saw two groups: one with internet access and one without. This basic access issue is now referred to as the 'first level' of the digital divide.[17]

Second Level

As internet access has grown in many Western countries, simply having a connection is no longer the only challenge. As basic access has expanded, attention shifted to a second layer of the divide: differences in digital skills and usage. In other words, even among those who are online, not everyone can use the internet effectively or confidently.[18] Many people who technically have an internet connection

[13]Charlie Muller and João Paulo de Vasconcelos Aguiar, "What Is the Digital Divide?" *Internet Society* (March 2022), available at: https://www.internetsociety.org/blog/2022/03/what-is-the-digital-divide/ (last visited on Oct. 2, 2025).

[14]Jan A.G.M. van Dijk, *The Digital Divide* 1–17 (Polity Press, Cambridge, 2020), available at: https://www.researchgate.net/publication/336775102_The_Digital_Divide (last visited Sept. 23, 2025).

[15]R. Van Kessel, A. Roman-Urrestarazu, et al, "Mapping factors that affect the uptake of digital therapeutics within health systems: Scoping review", *Journal of Medical Internet Research* (2023) [DOI: 10.2196/48000].

[16] National Telecommunications and Information Administration, "Falling through the Net II: New Data on the Digital Divide" (n.d.), available at: https://www.ntia.gov/report/1998/falling-through-net-ii-new-data-digital-divide (last visited September 17, 2025)

[17] A. Scheerder , A. Van Deursen and J Van Dijk, "Determinants of Internet skills uses and outcomes. A systematic review of the second-and third-level digital divide" 34(8) *Telematics and Informatics*. 1607-1624 (2017) [DOI: 10.1016/j.tele.2017.07.007].

[18]Alexander J.A.M. Van Deursen and EJ Helsper, "The third-level digital divide: Who benefits most from being online?",in Robinson L, Cotten SR, Schulz J, Hale TM, Williams A, (eds.), *Studies in Media and Communications* 29-52 (Vol 10, Bingley, UK, Emerald Group Publishing Limited, 2015) [DOI: 10.1108/S2050-206020150000010002].

still struggle to benefit from it due to limited skills, low confidence, or lack of relevant content in their language. Some end up not using the technology at all, despite having access.[19]

As internet use continues to grow around the world, the focus has shifted from just giving access to making sure people know how to use digital tools in meaningful ways. Having internet alone is not enough — people need the right skills to use it effectively. This growing need for digital literacy is now seen as part of the *second level* of the digital divide.[20]

Digital literacy is more than just knowing how to use digital devices. It also includes the ability to think critically and use digital platforms in a safe and responsible way. Professor Gilster (1997) described digital literacy as the skill to use different types of digital media while also understanding the information they contain. According to UNESCO (2018), digital literacy means *"the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately through digital technologies."*[21] This concept also highlights the importance of critical thinking and digital ethics, especially today when false information and data security risks are common.[22]

The Ministry of Electronics and Information Technology (MeitY, 2020) defines digital literacy in India as the ability of individuals and communities to use digital tools for accessing government services, managing finances, and gaining education. This definition supports the main goals of the Digital India campaign.[23]

Therefore, even though most people now have access to digital technology, the importance of digital literacy has become more noticeable. It is now seen as a key part of the second stage of the digital divide.

Third Level

Over time, the basic idea of the digital divide, mainly about access, has grown into what is now called a "learning divide" and a "content divide."[24] This broader view includes not just access to devices or the internet, but also differences in digital skills, the availability of technology, interest in using it, and the reasons people use it.[25] These aspects show that the digital divide is not only about having access, but also about whether people have the chance to use technology (physical access), the confidence and

[19]H Lee, S Jeong and K Lee, "The south Korean case of deploying rural broadband via fiber networks by implementing universal service obligation and public-private partnership-based project" 47(3) *Telecommunications Policy* 102-506 (2023) [DOI: 10.1016/j.telpol.2023.102506].

[20]M. Mäkinen, "Digital empowerment as a process for enhancing citizens' participation" 3(3) *E-Learning and Digital Media* 381-395 (2006) [DOI: 10.2304/elea.2006.3.3.381].

[21]United Nations Educational, Scientific and Cultural Organization, "Literacy: What You Need to Know" (5 September 2025), available at: https://www.unesco.org/en/literacy/need-know (last visited Sept. 20, 2025).

[22]Dr. Manoj Kumar Nag and Mr. Upesh Kumar Meher, "Digital Literacy in India: Achievements and Challenges" 13 *International Journal of Creative Research Thoughts* 823 (2025), available at https://www.ijcrt.org/papers/IJCRT25A4851.pdf (last visited Sept5. 25, 2025).

[23]Dr. Manoj Kumar Nag and Mr. Upesh Kumar Meher, "Digital Literacy in India: Achievements and Challenges" 13 *International Journal of Creative Research Thoughts* 823 (2025), available at https://www.ijcrt.org/papers/IJCRT25A4851.pdf (last visited Sept5. 25, 2025).

[24]EM Rogers, "The digital divide", 7 *Convergence: The International Journal of Research into New Media Technologies*. 96-111 (2001) [DOI: 10.1177/135485650100700406].

[25]Alexander J.A.M. Van Deursen and Jan A.G.M. Van Dijk "The digital divide shifts to differences in usage" 16(3) *New Media & Society* 507-526 (2014), available at: https://www.researchgate.net/publication/259703073_The_digital_divide_shifts_to_differences_in_usage (last visited on Sept 23, 2025).

willingness to use it (mental or emotional factors), and the practical skills needed.[26]

Digital Literacy Rights in India

Constitutional perspective

In India, the legal view on digital literacy is developing, especially after the Supreme Court's 2025 decision in *Amar Jain v. Union of India*.[27] *affirmed that 'digital access' is now integral to the fundamental right to life (Article 21)*.[28] The judgment also made it clear that keeping people away from digital platforms is a form of discrimination & leads to social and economic disadvantage[29], which goes against the right to equality under Article 14. The division bench accepted that **"**the principle of substantive equality demands that digital transformation be both inclusive and equitable.**"**[30]

The bench stated that in today's modern times, where important services like education, healthcare, government schemes, and job opportunities are mostly available through digital platforms, the right to life under Article 21. The Court reasoned that excluding people from digital platforms amounts to discrimination and violates Article 14's guarantee of equality The bench emphasized a need for 'inclusive and equitable' digital transformation, invoking the principle of substantive equality." should be understood in the context of these new technological developments.[31] As a result, the government now has a duty to create digital spaces and services that are inclusive and accessible to everyone, especially for people with disabilities and other disadvantaged communities.

Jurisprudential perspective

The **right to digital access** can be strongly related to the **Sociological School of Jurisprudence**, which focuses on law as a tool to meet the changing needs of society. According to this school, law should not be seen only as a set of fixed rules but as a living instrument that evolves with social progress. In today's digital age, access to the internet and digital tools has become essential for education, employment, communication, and even exercising basic rights. From a sociological perspective, denying digital access can lead to social inequality and limit individual growth. Therefore, legal systems must recognize digital access as a part of social justice and work to remove barriers that prevent marginalized communities from benefiting equally. This approach highlights how law must adapt to ensure fairness and inclusion in a technology-driven world.[32]

[26]Alexander J.A.M. Van Deursen and Jan A.G.M. Van Dijk, "The first-level digital divide shifts from inequalities in physical access to inequalities in material access", 21(2) *New Media & Society* 354-375 (2018) [DOI: 10.1177/1461444818797082].

[27] W.P.(C) No. 49 of 2025.

[28]The PRESS Pad, "SC Upholds Digital Accessibility as a Fundamental Right for Persons with Disabilities," *The PRESS Pad* (June 2025), available at: https://www.thepresspad.com/post/sc-upholds-digital-accessibility-as-a-fundamental-right-for-persons-with-disabilities#:~:text=emphasized%20that%20the%20digital%20divide%C2%A0excludes,participation%20in%20the%20digital%20era, (last visited Sept. 27, 2025).

[29]PMF IAS, "Digital Access as a Fundamental Right" (6 May 2025), available at https://www.pmfias.com/digital-access-as-fundamental-right/ (last visited Oct. 1, 2025).

[30]Anuradha Gandhi and Rachita Thakur, "Digital Access a part of right to life and liberty: Supreme Court" (May 30, 2025), available at https://ssrana.in/articles/digital-access-a-part-of-right-to-life-and-liberty-supreme-court/ (last visited Oct. 4, 2025).

[31]The PRESS Pad, "SC Upholds Digital Accessibility as a Fundamental Right for Persons with Disabilities," *The PRESS Pad* (June 2025), available at: https://www.thepresspad.com/post/sc-upholds-digital-accessibility-as-a-fundamental-right-for-persons-with-disabilities#:~:text=emphasized%20that%20the%20digital%20divide%C2%A0excludes,participation%20in%20the%20digital%20era, (last visited Sept. 27, 2025).

[32] Jyaditya Dogra, "Understanding the Sociological School of Jurisprudence: Exploring the Intersection

The *Amar Jain v. Union of India*[33] case reflects the Sociological School of Jurisprudence, because it treats law as a living instrument that must promote social justice, inclusivity, and equal access in a changing society.

Government policies

Digital India Programme[34]**:** Started in 2015, the Digital India campaign aims to make India a strong digital society and knowledge-based economy. It mainly focuses on building digital infrastructure, helping people become digitally skilled, and providing government services through digital platforms[35]

Pradhan Mantri Gramin Digital Saksharta Abhiyan[36]**:** This is a key programme under Digital India that aims to make at least one person in each of 6 crore rural households digitally literate. It offers basic training on how to use computers and the internet, helping people use online services easily.[37]

BHASHINI (BHASHa INterface for India)[38]**:** BHASHINI (Bhasha Interface for India) is an AI-based project started by the Indian government to remove language barriers. Its goal is to help everyone access digital services and information in their own Indian language, promoting digital inclusion for all.

National Digital Literacy Mission (NDLM)[39]**:** The NDLM (National Digital Literacy Mission) aims to provide digital literacy training to at least one person in each household in selected states and union territories. It mainly focuses on helping people from weaker sections of society, such as women, minorities, and persons with disabilities, so that everyone can take part in the digital growth of the country.[40]

National Institute of Electronics and Information Technology (NIELIT)[41]**:** NIELIT provides different digital literacy courses and certificates for people of all age groups to improve their computer and technology skills.[42]

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of Law and Society" IV(1) *NYAAYSHASTRA LAW REVIEW* (2023), available at: https://core.ac.uk/download/581012782.pdf (last visited Sept. 28, 2025).

[33] W.P.(C) No. 49 of 2025.

[34]Government of India, "Digital India: Power to Empower" (Ministry of Electronics and Information Technology, 2015), available at: https://www.digitalindia.gov.in/about-us/ (last visited Sept, 22, 2025).

[35]"Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[36]Government of India, "Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)" (Ministry of Electronics and Information Technology, 2017), available at: https://www.myscheme.gov.in/schemes/pmgdisha (last visited Sept. 22, 2025).

[37]Roshini Muthukumari, "10 Initiatives Taken By the Government of India To Bridge The Digital Divide" (n.d.), available at: https://bharatcares.org/10_Initiatives_Taken_By_the_Government_of_India_To_Bridge_The_Digital_Divide (last visited Sept. 27, 2025).

[38]Government of India, "Bhashini" (Ministry of Electronics and Information Technology, 2022), available at: https://bhashini.gov.in/ (last visited Sept. 27, 2025).

[39]Government of India, "Digital Literacy Mission — Press Release" (Press Information Bureau, 21 Dec. 2022), available at: https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1885365 (last visited Sept. 28, 2025).

[40]"Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[41]Government of India, "National Institute of Electronics & Information Technology (NIELIT)" (Ministry of Electronics & Information Technology, 2011), available at: https://www.nielit.gov.in/kohima/nielit-news, (last visited Sept 27, 2025).

[42] "Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at:

National Education Policy (NEP) 2020[43]: This policy supports the use of technology in education. It encourages blended learning, building digital infrastructure, adding technology into the syllabus, and training teachers to improve digital skills.

National Digital Library of India (NDLI)[44]: NDLI is an online library that gives access to a wide range of e-books, e-journals, and other study materials. It supports self-learning and lifelong education, helping students and teachers improve their digital knowledge.[45]

Scheme for Promotion of Information Technology in Rural India (SPIRIT): This program supports digital literacy by giving financial help to NGOs and other organizations to open IT training centres in rural areas.[46]

Special Acts

There is no dedicated law for digital literacy yet. However, in 2024 a Private Member's Bill – the **Right to Digital Literacy Bill** – was introduced, proposing to integrate digital literacy into all school and college curriculums.[47]

The Right to Digital Literacy Bill, 2024[48]: This bill, proposed by a private member, suggests that digital literacy should be added to the syllabus of all schools and colleges.

The Digital India Act (expected in 2025)[49]: This upcoming law aims to create a modern legal system for India's digital world. It will include rules to support digital literacy and manage new technologies.

Case Laws

In the case of Maneka Gandhi v. Union of India (1978)[50], the Supreme Court held that any procedure restricting the right to life (Article 21) must be just, fair, and reasonable, not arbitrary, or oppressive. This broadened interpretation of Article 21 laid the groundwork for later recognizing certain digital rights. Later, in *Faheema Shirin R.K. v. State of Kerala* (2019)[51], the Kerala High Court was the first to explicitly recognize that access to the Internet is part

https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[43]Government of India, "National Education Policy 2020" (Ministry of Human Resource Development, 2020), available at: https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf (last visited Sept. 24, 2025).

[44] Government of India, "National Digital Library of India (NDLI)" (Ministry of Education, 2018).

[45] "Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at: https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[46] "Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[47]India Council for Research on International Economic Relations (ICRIER), "Digital Literacy" (December, 2022), available at: https://icrier.org/policy_bank/digital-literacy/#:~:text=In%202022%2C%20the%20Right%20to,Read%20More (last visited Sept. 30, 2025).

[48]The Right to Digital Literacy Bill, 2024, India, available at: https://sansad.in/getFile/BillsTexts/RSBillTexts/Asintroduced/8e214202544040PM.pdf?source=legislation#:~:text=1.,in%20the%20Official%20Gazette%2C%20appoint.&text=(o)%20%22virtual%20digital%20asset,of%20the%20Finance%20Act%2C%202022.&text=3.,Digital%20Literacy%20Curriculam.&text=in%20the%20Official%20Gazette%20specify,adopted%20in%20all%20educational%20institutions.&text=(d)%20is%20revised%20at%20such,with%20the%20changing%20technological%20landscape.&text=4.,digital%20literacy%20in%20the%20curriculum (last visited Oct. 1, 2025).

[49]Delhi Law Academy, "The Digital India Act: Overview & Features" (May 20, 2025), available at https://www.delhilawacademy.com/digital-india-act/#:~:text=The%20Digital%20India%20Act%2C%202023,India's%20digital%20space%20more%20effectively (last visited Oct. 2, 2025).

[50]AIR 1978 SC 597.

[51]AIR 2020 Ker 35.

of the fundamental Right to Life (Article 21), as well as the Right to Education (Article 21A). The court struck down a college hostel rule that banned students from using mobile phones, reasoning that such a ban violated their fundamental rights.

In Anuradha Bhasin v. Union of India (2020), the Supreme Court affirmed that the freedom of speech under Article 19(1)(a) extends to the Internet as a medium, and that Article 19(1)(g) (freedom to practice any profession) likewise protects online business and trade.[52] The Court stressed that any restriction on internet access must be reasonable and proportionate to be lawful.[53]

In *Rajiv Raturi v. Union of India and Ors.*[54] the Supreme Court highlighted that access to public services and digital platforms is essential to living with dignity (an intrinsic part of Article 21). In other words, ensuring digital accessibility is not just a policy choice but a fundamental right of persons with disabilities.

Challenges in Digital Literacy and its analysis

In today's digital world, it is difficult to opt out of using technology. Yet a digital gap persists: many individuals still lack either the access or the ability to use digital tools. In other words, a significant portion of the population is being left behind in terms of internet connectivity and digital skills[55].

India had roughly 806 million internet users by January 2025, which is about 55.3% of the population. This marked a growth of about 49 million users since January 2024, a year-over-year rise of 6.5% in internet usage. Despite this progress, roughly 652 million Indians remained offline as of early 2025, meaning 44.7% of the population still lacked internet access.[56]

People in rural areas are behind those in cities when it comes to using digital services. For example, while digital payments like UPI are popular in cities, many villagers still depend on cash. As of now, there is no special "Family Health Survey Report" for 2025 that gives internet usage details by gender. However, the most recent data from the National Family Health Survey (NFHS-5) for 2019–2021 shows a clear gap between men and women in using the internet. Across India, 57% of men had used the internet, while only 33% of women had. This gap is even wider in rural areas, where men are about twice as likely as women to use the internet.[57]

Gap in Digital Knowledge: Digital infrastructure by itself is not enough, improving the population's digital skills is equally critical. Despite initiatives like PMGDISHA, many people lack basic skills and thus struggle to use services such as UPI or online portals.[58] In short, if policy focuses only on laying down technology and not on teaching people how to use it, many communities will fail to fully benefit from new digital investments.[59]

[52]India's Digital Public Infrastructure," *Drishti IAS*, 22 July 2024, available at https://www.drishtiias.com/daily-updates/daily-news-editorials/india-s-digital-public-infrastructure-2 (last visited Sept. 29, 2025).
[53](2020) 3 SCC 637
[54]2024 INSC 858.
[55]S Lythreatis, SK Singh and AN El-Kassar, "The digital divide: A review and future research agenda" *Technological Forecasting and Social Change* (2022) [DOI: 10.1016/j.techfore.2021.121359].
[56]Simon Kemp, "Digital 2025: India" (Datareportal, 25 February 2025), available at: https://datareportal.com/reports/digital-2025-india (last visited Sept. 24, 2025).
[57]Government of India, "National Family Health Survey (NFHS-5) 2019-21" 23 (Ministry of Health and Family Welfare, 15 March 2022), available at: https://mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf (last visited Sept. 28, 2025).
[58]"India's Digital Public Infrastructure," *Drishti IAS*, 22 July 2024, available at https://www.drishtiias.com/daily-updates/daily-news-editorials/india-s-digital-public-infrastructure-2 (last visited Sept. 29, 2025).
[59]Thomas N. Friemel, Tobias Frey and Alexander Seifert, "Multidimensional Digital Inequalities" 1(1)

Language Barriers: India has 22 official languages and many local dialects, which makes language a big challenge for using digital technology. Although projects like BHASHINI are working to fix this issue, it is still difficult to provide full language support on all digital platforms. For instance, many government apps and websites are mostly in English or Hindi, which makes them hard to use for people who speak other languages.[60]

Digital Exclusion: Digital exclusion often translates into social exclusion, someone without internet access or skills misses out on personal development opportunities, jobs, and even civic participation. In today's world, lack of digital know-how can silence voices in the democratic process. To prevent that, it is essential that everyone has access to the internet and the training to use it effectively, so all groups can participate equally in society.[61]
Today, the digital gap is less about access and more about the skills needed to use technology. Many vulnerable groups do not use digital services—not because they lack access, but because they lack the skills.[62] This shows why it is important to look at how people use digital tools[63] and how their backgrounds affect their ability to benefit from them.[64]

Even though more people now have access to the internet, there are still major differences in how they use it and the digital skills they have.[65]

International Perspective

UN human rights framework on digital inclusion

The United Nations has urged the world to adopt a global set of digital rights that are rooted in human rights laws.[66] This aims to make sure that everyone is treated with fairness, safety, freedom, and dignity in the digital world. The goal is to ensure that all people can fully enjoy their rights while using the internet. This framework supports equal access to information, chances for growth, and participation in society, while also protecting everyone from harm, unfair treatment, and online abuse. It also respects people's privacy, identity, and freedom to express themselves. The framework is built around nine key principles for the digital space[67]:

Weizenbaum Journal of the Digital Society 1-20 (2021) [DOI: 10.34669/WI.WJDS/1.1.3].

[60]"India's Digital Public Infrastructure," *Drishti IAS*, 22 July 2024, available at https://www.drishtiias.com/daily-updates/daily-news-editorials/india-s-digital-public-infrastructure-2 (last visited Sept. 29, 2025).

[61]D. Qualter, "From digital exclusion to digital inclusion: Shaping the role of parental involvement in home-based digital learning—A narrative literature review" 41(2) *Computers in the Schools*. 120-144 (2024). [DOI: 10.1080/07380569.2024.2322167].

[62]Alexander J.A.M. Van Deursen and EJ Helsper, "The third-level digital divide: Who benefits most from being online?",in Robinson L, Cotten SR, Schulz J, Hale TM, Williams A, (eds.), *Studies in Media and Communications* 29-52 (Vol 10, Bingley, UK, Emerald Group Publishing Limited, 2015) [DOI: 10.1108/S2050-206020150000010002].

[63]Z Papacharissi (ed.), "From dabblers to omnivores: A typology of social network site usage" *In: A Networked Self. New York: Routledge* 154-176 (2010) [DOI: 10.4324/9780203876527-14].

[64]E. Hargittai , "Second-level digital divide: Differences in people's online skills" 7(4) *First Monday* 1-15 (2002) [DOI: 10.5210/fm.v7i4.942].

[65]HV Krause, K Baum, A Baumann and H. Krasnova, "Unifying the detrimental and beneficial effects of social network site use on self-esteem: A systematic literature review" 24(1) *Media Psychology*. 10-47 (2019) [DOI: 10.1080/15213269.2019.1656646].

[66]United Nations Tech Envoy, *Alliance for Universal Digital Rights* (2023), available at: https://www.un.org/digital-emerging-technologies/sites/www.un.org.techenvoy/files/230203_Alliance_for_Universal_Digital_Rights.pdf (last visited on Sept. 28, 2025).

[67]Alliance for Universal Digital Rights, "Digital Principles" (AUDRi, 2023), available at: https://audri.org/digital-principles/ (last visited Sept. 25, 2025).

(a)*Universal and equal rights (b)Personal safety and data privacy (c)Digital self-determination (d)Digital Access for All (e)Freedom of expression and association (f)Secure, stable, and resilient networks (g)Linguistic and cultural diversity (h)Universal standards and regulations (i)Good digital governance*

EU policies on digital rights and digital literacy

The European Union has put forward a Declaration on Digital Rights and Principles for the Digital Decade, outlining its vision for a human-centric digital transformation. This declaration is essentially a roadmap to ensure that Europe's digital development "puts people first" – guaranteeing it is inclusive, equitable, and aligned with fundamental rights. It acknowledges the profound impact of digital technologies on daily life and economic growth, and calls for a sustainable, values-driven digital future.[68]

The EU Declaration acknowledges potential risks of the digital transition (to democracy, the economy, and individual rights) and insists that technological progress must not come at the expense of fundamental rights. It reiterates a people-centric digital future as the goal, in line with European core values of democracy, equality, and sustainability. The declaration reinforces commitments to rights like data protection and privacy, and principles such as fairness, inclusion, safety, and equal access in the online environment, for all citizens.[69]

EU digital education plan

Recognizing the importance of digital skills (a need underscored by the COVID-19 pandemic), the EU launched a new Digital Education Action Plan (2021–2027) on 30 September 2020. The plan sets out two core objectives: (1) to build a high-performing digital education ecosystem across Europe, and (2) to enhance the digital competences of citizens. In essence, it strives to make digital education systems more accessible, innovative, and inclusive throughout the EU.[70] Its aim is to make digital education more accessible, better in quality, and inclusive for everyone.

A human rights-based framework for digital literacy

The United Nations (UN) and the European Union (EU) both works to protect people's basic rights while supporting the growth of digital technology. Their plans focus on respecting human dignity, personal freedom, and including everyone in the progress of technology. They believe digital changes should meet real human needs and be guided by human rights, helping society.

International frameworks recognize that certain groups: children, persons with disabilities, and linguistic or ethnic minorities , are particularly vulnerable to digital harms. Both the UN and EU call for measures to safeguard such groups from issues like cyberbullying, biased algorithms, and other forms of digital discrimination. This entails updating human rights protections to address new digital-age risks.[71]

[68]European Commission, "European Declaration on Digital Rights and Principles for the Digital Decade" (2022), available at: https://digital-strategy.ec.europa.eu/en/library/european-declaration-digital-rights-and-Principles (last visited Oct. 3, 2025).

[69]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[70] European Commission. Digital Education Action Plan (2021-2027). 2021. Available from: https://education.ec.europa.eu/focus-topics/digital-education/action-plan

[71]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

There are three main digital rights that are closely linked and guide the way forward:

1. **Right to provision** which means access to digital services. Generally, the right to provision means that every person and community should get the basic goods and services they need to live properly and with respect.[72] This right is supported by important international documents, such as the Universal Declaration of Human Rights (UDHR)[73] and the International Covenant on Economic, Social, and Cultural Rights (ICESCR)[74]. In today's digital age, the right to provision means more than just having an internet connection. It also includes all the necessary conditions that help people use digital tools and services in a useful and effective way.[75]

2. **Right to participation** which means the ability to take part online. The right to participation means that people should be able to take part in social, cultural, and political activities by sharing their views and being involved in group decisions. In the digital world, this also means using technology to join public discussions, support democracy, and enjoy their rights online.[76]

3. **Right to protection** which means safety in the digital world. The right to protection means keeping people safe from harm in online spaces. It includes guarding them against actions, by others or by society, that could hurt their rights, safety, or overall well-being.[77] This right shows the importance of updating human rights rules to deal with new dangers caused by digital technology, which can affect the safety of the online world.[78]

Suggestions

1. Focus on Inclusion: Create learning programs in local languages that are suitable for people of all ages and abilities. These programs should help reduce gaps in education and make sure no one is left behind.[79]

[72]World Health Organization, "Ensuring Human Rights in the Provision of Contraceptive Information and Services: Guidance and Recommendations" (2014), Geneva, available at https://iris.who.int/handle/10665/102539 (last visited Sept. 24, 2025).

[73]United Nations General Assembly, *Universal Declaration of Human Rights*, GA Res. 217A (III), UN Doc. A/810 (10 December 1948), available at https://www.un.org/en/about-us/universal-declaration-of-human-rights (last visited 4 October 2025).

[74]United Nations, *International Covenant on Economic, Social and Cultural Rights*, United Nations Treaty Series, vol. 993, 16 Dec. 1966, pp. 9–12, available at: https://treaties.un.org/pages/viewdetails.aspx?src=treaty&mtdsg_no=iv-3&chapter=4 (last visited Oct.1 2025).

[75]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[76]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[77]M. Langford, M.Skivenes, et.al. (eds.) "Children's Rights in Norway: An Implementation Paradox?"? *Oslo: Universitetsforlaget* (2019) [DOI: 10.18261/9788215031415-2019].

[78]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[79]"Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at

Unlike digital access, which is mainly about having internet or devices, digital participation is about both having these technologies and knowing how to use them properly. It means being able to use digital tools in everyday life and to take part in social activities through them.[80]

2. Building Infrastructure: Strengthening digital infrastructure, especially in villages and small towns, is very important to improve digital literacy in India. This includes better internet access, setting up digital learning centers, and making devices like smartphones and computers affordable for everyone.[81] Investing in digital infrastructure is important to make sure everyone has equal access to technology.[82]

3. Supporting Teachers for Digital participation and accessibility: Launch large-scale training and awareness programs to spread digital literacy among different groups like students, working professionals, and older adults. These programs should teach useful digital skills and promote online safety. Also, teachers should be trained to use digital tools and online materials in their classrooms in the right way.[83] The importance of making digital services accessible for everyone and protecting personal data[84].

Digital literacy and core competencies

Digital literacy training is not just about learning how to use digital tools and resources. It also includes teaching people how to use them in a legal, safe, and responsible way. This means learning how to find, check, and use information properly online; understanding the importance of digital technology and personal data; knowing your own digital rights; and following the right actions to protect yourself and others in the online world.[85] To solve these problems, special education and training are needed for both individuals and professionals.[86] To truly bridge the digital divide, people not only need access to technology but also the digital skills to use it effectively in their daily lives.[87]

Civil engagement in digital spaces

Digital technology creates new chances for people to take part in civic and political activities. E-government has helped build a better connection between citizens and the government by making

https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[80]M. Mäkinen, "Digital empowerment as a process for enhancing citizens' participation" 3(3) *E-Learning and Digital Media* 381-395 (2006) [DOI: 10.2304/elea.2006.3.3.381].

[81]"Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[82]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[83]"Empowering the Nation: Strategies for Enhancing Digital Literacy in India," *The United Indian*, 18 March, 2024, available at https://theunitedindian.com/news/blog?Digital-literacy-in-India&b=193&c=3 (last visited Oct. 3, 2025).

[84]Anuradha Gandhi and Rachita Thakur, "Digital Access a part of right to life and liberty: Supreme Court" (May 30, 2025), available at https://ssrana.in/articles/digital-access-a-part-of-right-to-life-and-liberty-supreme-court/ (last visited Oct. 4, 2025).

[85]D. Qualter, "From digital exclusion to digital inclusion: Shaping the role of parental involvement in home-based digital learning—A narrative literature review" 41(2) *Computers in the Schools*. 120-144 (2024). [DOI: 10.1080/07380569.2024.2322167].

[86]C.K. Sanders and E.Scanlon, "The digital divide is a human rights issue: Advancing social inclusion through social work advocacy" 6(2) *Journal of HumDal an Rights and Social Work*. 130-143 (2021) [DOI: 10.1007/s41134-020-00147-9].

[87]HV Krause, K Baum, A Baumann and H. Krasnova, "Unifying the detrimental and beneficial effects of social network site use on self-esteem: A systematic literature review" 24(1) *Media Psychology*. 10-47 (2019) [DOI: 10.1080/15213269.2019.1656646].

public decisions more open and responsible. Also, e-participation allows people from weaker or ignored communities to get involved in policy-making and helps create a more balanced sharing of power.[88] To support public participation in e-government projects, the government should create policies that help build strong digital infrastructure, improve people's digital skills, offer useful online content and platforms, and give clear instructions on how citizens can take part in decision-making.[89]

Conclusion

The arrival of the Internet has completely changed the way people live and manage different parts of their daily lives. It has transformed how we communicate and find information, becoming an essential part of modern survival. The Internet has helped reduce social, economic, and even physical barriers, deeply influencing our everyday activities[90]. As of 2025, around 5.35 billion people use the Internet globally, and this number is expected to grow to 7.9 billion by 2029.[91]

The Internet was expected to make access to information equal for everyone — and in many ways, it has. It became a turning point in the history of technology and continues to inspire new innovations. Today, we carry massive amounts of information in our pockets — far more than the biggest libraries ever held. But even with this progress, we still talk about the "digital divide," as if a huge gap suddenly appeared. The very technology that was meant to erase distance has, in some ways, created new boundaries between those who are included and those who are left out.[92]

Towards equitable digital participation

On April 30, 2025, the Supreme Court of India gave a historic judgment in the case of *Amar Jain v. Union of India*, which brought a major change in how fundamental rights are viewed in today's digital world. The bench, led by Justice Pardiwala and Justice Mahadevan, set an important example by declaring that the "right to digital access" is now a part of fundamental rights.

There are deeper ideas to think about when it comes to inclusion, independence, and how important technology is in building a society that supports people of all kinds. As the respected judges pointed out, the right to digital access is now seen as an important part of the right to life and freedom under Article 21 of the Constitution. This means the government has a responsibility to actively create digital systems that are inclusive and accessible to everyone.[93]

[88]J. Vázquez-Herrero, S. Direito-Rebollal ad X.López-García. "Digital native media and news diversity: a case study in spain and Portugal", 17 *International Journal of Communication* 3601-3621 (2023), available at: https://ijoc.org/index.php/ijoc/article/view/18833/4189 (last visited on Sept. 24, 2025).

[89]Cong Yao and Paul Quinn, "Bridging the Digital Divide: A Human Rights-Based Approach to Digital Literacy and Equity in the EU," in *Digital Equity and Literacy* (London, IntechOpen, 31 July 2025), available at: https://www.intechopen.com/online-first/1224294 (last visited Sept. 24, 2025).

[90]Aakansha Ghritlahre, Deepshikha Verma and Nisha Rathore, "The Study on the Impact of the Internet on Human Beings- Does It Make Them Smarter?" 13(6) *International Journal of Engineering Research & Technology* 1-5 (6 June 2024), available at: https://www.ijert.org/research/the-study-on-the-impact-of-the-internet-on-human-beings-does-it-make-them-smarter-%20IJERTV13IS060002.pdf (last visited on Sept 23, 2025).

[91]Lexie Pelchen and Samantha Allen, "Internet Usage Statistics In 2025," *Forbes* (1 March 2024), available at https://www.forbes.com/home-improvement/internet/internet-statistics/ (last visited Oct. 4, 2025).

[92]Andrew Blick, "The internet and democracy: an historical perspective" (31 May 2017), available at https://historyandpolicy.org/policy-papers/papers/the-internet-and-democracy-an-historical-perspective/ (last visited Sept. 28, 2025).

[93]Nishita Sharma, "Digital Access as a Fundamental Right" (August 1, 2025), available at: https://vidhilegalpolicy.in/blog/digital-access-as-a-fundamental-right/ (last visited on Oct 26, 2025).

This is not a coincidence; it has always worked this way — efforts to include everyone often lead to new and more subtle ways of leaving some people out. The same tools meant to connect us can sometimes end up creating distance between us.[94]

The Internet plays a key role in providing basic needs like education[95] and helping people stay connected in society. If someone is denied these opportunities because of a physical or mental disability, it is a form of discrimination and a violation of their rightful access to essential services.

New technologies open the door to a new and advanced way of living, and they should be designed to include everyone from the beginning. Inclusiveness must be a basic part of how these systems are created, rather than something added later when someone asks for it. Modern tools like virtual reality, augmented reality, brain-computer connections, and smart devices bring new challenges when it comes to making sure they are accessible to all.[96]

Accepting that social and digital media are now a key part of our right to speak and express ourselves means that digital rights are legally recognised. This also puts a greater duty on the government to protect and support these rights. It shows that the internet is no longer just a tool rather it has become a personal part of our daily lives. When we look at the internet as a way for people to take part in social and political matters, it leads to the idea of **digital citizenship**, which means actively participating in community and democratic activities through online platforms.[97]

Internationally speaking, even the European plan highlights fairness and equal access as two important goals when it comes to digital skills. It explains that digital knowledge is essential for living in today's online world. It also says that everyone in the EU should learn how digital tools affect their daily lives and understand how technology works.[98]

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[94]Nishita Sharma, "Digital Access as a Fundamental Right" (August 1, 2025), available at: https://vidhilegalpolicy.in/blog/digital-access-as-a-fundamental-right/ (last visited on Oct 26, 2025).
[95]Isolda Lisboa, João Barroso & Tânia Rocha, *Digital Accessibility of Online Educational Platforms: Identifying Barriers for Blind Student's Interaction,* International Conference on Innovative Technologies and Learning, Held on (Portal, Portugal and 23-26 November), available at: https://link.springer.com/chapter/10.1007/978-3-030-63885-6_46#citeas (last visited Sept. 30, 2025).
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[98]European Commission, "Digital Education Action Plan (2021–2027)" (2021), available at: https://education.ec.europa.eu/focus-topics/digital-education/action-plan (last visited Oct. 3, 2025).

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