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EMPOWERING PERSONS WITH DISABILITIES THROUGH ICT: LEGAL RECOGNITION, POLICY FRAMEWORK, AND INCLUSIVE SUPPORT IN INDIA

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Abstract

Empowering persons with disabilities through Information and Communication Technology (ICT) and Artificial Intelligence (AI) reflects a fundamental shift in India's legal and institutional approach toward equality, dignity, and inclusion. Anchored in the Rights of Persons with Disabilities Act, 2016, and supported by national programmes like Digital India and Sugamya Bharat Abhiyan, ICT has become central to ensuring access to education, employment, communication, and public services for individuals with diverse disabilities. Assistive tools such as screen readers, speech-to-text converters, and AI-powered navigation devices enable independent learning and mobility, while inclusive digital platforms expand professional opportunities and civic participation. Judicial pronouncements, including National Federation of the Blind v. UPSC and Deaf Employees Welfare Association v. Union of India, have reinforced the constitutional imperative of using technology to bridge systemic barriers. Regulatory bodies like UGC, AICTE, and RCI have also institutionalized accessibility standards, inclusive pedagogy, and academic accommodations. While AI further enhances personalized support, ethical concerns and uneven access highlight the need for responsible design and implementation. Ensuring universal access, affordability, and awareness remains key to transforming ICT from a technological aid into a rights-based instrument of empowerment for persons with disabilities.

Key words: ICT, Persons with Disabilities, RPwD Act 2016, Assistive Technology, Inclusive Education, Digital Accessibility, AI for Inclusion, Disability Rights, Dworkin's Law as Integrity, , WCAG, Equal Opportunity, Empowerment, Indian Legal Framework

Introduction

In India, Persons with Disabilities (PwDs) are recognized as a distinct special needs category requiring focused attention and support to ensure equal participation in society. The Department of Empowerment of Persons with Disabilities (DEPwD)[550], functioning under the Ministry of Social Justice and Empowerment, is the central authority responsible for shaping and implementing policies that promote inclusion, accessibility, and rights of PwDs across sectors. The classification and protection of PwDs are governed by the Rights of Persons with Disabilities Act, 2016, which identifies 21 types of disabilities, including visual, hearing, speech, locomotor, intellectual, and multiple disabilities. The Act specifically defines "persons with benchmark disabilities" as individuals with at least 40% of a certified disability, making them eligible for various entitlements such as reservations in education and employment, financial aid, and assistive services. Through targeted schemes and initiatives, such as accessible education, skill training, assistive technologies, and inclusive infrastructure the DEPwD seeks to eliminate barriers and create

[550] Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment, available at: https://disabilityaffairs.gov.in (last visited June 20, 2025)

equitable opportunities for PwDs[551]. This special needs categorization ensures that the unique challenges faced by persons with disabilities are addressed through dedicated legal safeguards, policy frameworks, and institutional mechanisms.

ICT as a Catalyst for Inclusion in Education, Communication, and Employment

Information and Communication Technology (ICT) has become a transformative tool in empowering persons with disabilities by ensuring equitable access to education, communication, and employment. In education, screen readers, speech-to-text tools, captioned videos, and accessible platforms like SWAYAM and DIKSHA enable students with diverse disabilities to participate in learning environments equally. Communication tools such as Augmentative And Alternative Communication (AAC) devices, real-time captioning, and video calling[552] with sign language interpretation allow individuals with hearing, speech, or cognitive impairments to interact effectively. In the employment sector, inclusive job portals, remote work technologies, and accessible online training programs enhance skill development and job opportunities, especially for those with mobility limitations.

Empowering Participation, Mobility, and Access to Public Services

Beyond the classroom and workplace, ICT promotes independent living, access to services, and social participation for persons with disabilities[553]. E-governance platforms streamline the process for accessing government schemes like pensions and scholarships through accessible websites compliant with WCAG 2.1. Apps like Sugamya Bharat and Seeing AI assist with reporting infrastructure gaps and navigating daily environments. Social media and online communities facilitate peer support, advocacy, and cultural inclusion through accessible content, audio-described entertainment, and digital activism. Moreover, smart home technologies and GPS-enabled mobility aids ensure greater autonomy and real-time support in public transport and personal environments, significantly enhancing quality of life.

Inclusive Education and Digital Accessibility for Persons with Disabilities: Legal and Policy Framework in India

India has established a comprehensive legal and policy foundation to ensure inclusive education and digital accessibility for persons with disabilities. The Rights of Persons with Disabilities Act, 2016 (RPwD Act) mandates free and compulsory education up to the age of 18 and guarantees equal access to higher education, including a 5% reservation for persons with benchmark disabilities. It also requires inclusive pedagogical practices, reasonable accommodations, and accessible digital content. Complementary initiatives such as Sugamya Bharat Abhiyan[554] and the Digital India programme[555] aim to enhance physical and digital infrastructure accessibility, while guidelines from the Department of Empowerment of Persons with Disabilities (DEPwD) and state-specific rules provide for local implementation.

Regulatory Guidelines by UGC, AICTE, and RCI

The University Grants Commission (UGC) has issued comprehensive guidelines under the 2012 and 2018 frameworks to promote equity and inclusion. These ensure barrier-free campuses, accessible ICT, scribe and reader

[551] The Rights of Persons with Disabilities Act, 2016, available at: https://legislative.gov.in/sites/default/files/A2016-49_1.pdf (last visited June 20, 2025).
[552] Indira Gandhi National Open University (IGNOU), "Unit-11: Local History", Issue Date: 2018, IGNOU, New Delhi, <…Unit-11.pdf> (accessed 20 June 2025).
[553] Abha Khetarpal, "Information and Communication Technology (ICT) and Disability," *Review of Market Integration*, 6(1) (April 2014) 96–113, DOI: 10.1177/0974929214560117, https://www.researchgate.net/publication/275242946_Information_and_Communication_Technology_ICT_and_Disability (accessed 20 June 2025).
[554] Sugamya Bharat Abhiyan (Accessible India Campaign), Department of Empowerment of Persons with Disabilities, available at: https://disabilityaffairs.gov.in/content/page/accessible-india-campaign.php (last visited June 20, 2025).
[555] Digital India Programme, Ministry of Electronics and Information Technology, available at: https://digitalindia.gov.in (last visited June 20, 2025)

services, inclusive pedagogy, and financial aid. A 2018 UGC directive mandates 5% reservation, creation of Equal Opportunity Cells, and faculty training[556]. Similarly, AICTE requires inclusive infrastructure, assistive exam support, and disability officers in its Approval Process Handbook[557]. Its reservation policy reconfirmed in 2023 reinforces the 5% benchmark. For special education degrees, the Rehabilitation Council of India (RCI) governs recognition[558], mandates disability-specific pedagogy, and enforces student-teacher ratios, ensuring quality education for and about persons with disabilities.

Institutional Compliance and Academic Support Mechanisms

Colleges and universities must establish Equal Opportunity Cells, appoint Disability Coordinators, maintain disability records, and offer assistive technologies like screen readers and magnifiers. Academic support includes exam concessions such as extra time, scribe use, alternate modes of writing, and accessible question formats (e.g., Braille or large print). Central schemes like the Post-Matric Scholarship and National Fellowship for PwDs (NFPwD)[559] provide financial support for students from Class XI to PhD. Institutional obligations also include staff sensitization, regular audits, and annual reporting to ensure a sustained and accountable inclusion framework.

Jurisprudential Perspective on ICT and Disability Rights

From a jurisprudential standpoint, the evolution of disability rights in India explained through cases like National Federation of the Blind v. UPSC and Deaf Employees Welfare Association v. Union of India, that reflects a shift from a welfarist or charity-based model of disability to a rights-based and dignitarian model, rooted in the constitutional ideals of equality, dignity, and liberty. These judgments affirm the natural law view that human dignity is inherent, and the state has a moral and legal duty to ensure that its institutions and systems, including examinations and employment structures, do not exclude persons with disabilities.

In National Federation of the Blind[560], the Supreme Court recognized the right to compete on equal terms in public employment exams, mandating the use of assistive technologies such as screen readers, Braille software, and scribes explicit affirmation of reasonable accommodation as a core element of equal treatment. This aligns with liberal egalitarian jurisprudence, where equality is not merely formal but substantive, ensuring equal access to opportunities through ICT for those historically marginalized.

Similarly, in Deaf Employees Welfare Association[561], the Andhra Pradesh High Court underscored that the right to life under Article 21 includes the right to live with dignity, which demands that the state adopt ICT tools such as captioning, sign language translation, and accessible digital training. The Court's directive to integrate ICT solutions into government training programs embodies Dworkin's theory[562] of law as integrity, where the law must reflect principles of justice and fairness in every official act, especially in the treatment of vulnerable groups.

Together, these cases uphold the juridical principle of inclusive equality and demonstrate how technology is not a privilege but a right.

[556] University Grants Commission, Guidelines for Persons with Disabilities in Higher Education Institutions (2012 & 2018), available at: https://www.ugc.gov.in/page/disability.aspx (last visited June 20, 2025).
[557] All India Council for Technical Education (AICTE), Approval Process Handbook 2023–24, available at: https://www.aicte-india.org/bureaus/approval/ap_2023-24 (last visited June 20, 2025).
[558] Rehabilitation Council of India (RCI), Guidelines and Institutional Recognition, available at: https://rehabcouncil.nic.in (last visited June 20, 2025).
[559] National Education Policy, 2020, Ministry of Education, available at: https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf (last visited June 20, 2025).
[560] Empowering Visually Handicapped Candidates in Civil Services Examinations: Analysis of National Federation of Blind v. UPSC, available at https://www.casemine.com/commentary/in/empowering-visually-handicapped-candidates-in-civil-services-examinations:-analysis-of-national-federation-of-blind-v.-upsc/view (last visited July 5, 2025).
[561] Deaf Employees Welfare Association v. Union of India, 2013 SCC OnLine AP 104 : (2014) 1 ALD 290 (AP) : MANU/AP/0651/2013, available at https://www.lawfinderlive.com/archivesc/500441.htm (last visited July 5, 2025).
[562] Dworkin's Law as Integrity, available at https://lawexplores.com/dworkins-law-as-integrity/ (last visited July 5, 2025).

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Which helping as a bridge between disability and capability. The judiciary, through these rulings, has not only interpreted the law but infused it with constitutional morality, paving the way for the enactment and robust implementation of the Rights of Persons with Disabilities Act, 2016, especially Section 42, which mandates ICT accessibility in all spheres of public life.

AI and Support for People with Disabilities

Artificial Intelligence (AI) significantly enhances accessibility and independence for persons with disabilities by offering personalized and adaptive assistive technologies. AI-powered tools such as smart wheelchairs[563], prosthetics, and educational platforms[564] can learn from user behavior and adjust accordingly, enabling tailored support for individuals with physical, cognitive, or learning disabilities. Visually impaired users benefit from AI-driven computer vision applications that narrate surroundings, read text aloud, or recognize faces, while those with hearing or speech impairments use real-time transcription, voice-to-text software, and sign language recognition systems. In education, AI fosters inclusive learning through platforms that adapt teaching methods and content to suit different learning styles and disabilities, promoting greater engagement and academic success.

Moreover, AI plays a key role in improving communication, mobility, and digital inclusion. Through natural language processing, voice assistants, and chatbots, individuals with disabilities can interact with devices and services more easily. AI also enhances navigation for those with mobility or visual impairments[565] by powering smart canes, wearable devices, and obstacle-detection systems. In the digital realm, AI auto-generates image descriptions, simplifies complex texts, and supports screen reader compatibility making websites and applications more accessible. These innovations enable persons with disabilities to participate fully in public life, access government services, and use mainstream technology without dependency.

Despite its promise, AI adoption for disability inclusion is not without challenges. Ethical concerns such as algorithmic bias, data privacy, and the exclusion of disabled users from AI training datasets need urgent attention. Many AI solutions remain costly, language-restricted, or poorly adapted to regional needs. Therefore, for AI to be a true enabler of inclusion, it must be guided by universal design principles, accessibility standards, and inclusive policymaking. When responsibly deployed, AI has the power to transform barriers into bridges empowering persons with disabilities to lead lives of dignity, autonomy, and equal opportunity.

Conclusion

Empowering persons with disabilities through ICT is not just a matter of technological advancement but a commitment to equality, dignity, and inclusive development. India's legal and policy framework anchored in the Rights of Persons with Disabilities Act, 2016, supported by initiatives like Digital India and Sugamya Bharat Abhiyan lays a strong foundation for this empowerment. However, the full potential of ICT can only be realized when access is universal, content is inclusive, and stakeholders are actively engaged. Bridging the digital divide for PwDs is essential for building a truly accessible and participatory society.

Recommendations:

1.Strengthen Implementation and Compliance Mechanisms

Enforce mandatory accessibility standards (such as WCAG 2.1) for all digital platforms, especially educational and public service websites, with regular audits and penalties for non-compliance.

[563] World Health Organization, Assistive Technology – Factsheet, available at: https://www.who.int/news-room/fact-sheets/detail/assistive-technology (last visited June 20, 2025).

[564] Be My Eyes, available at: https://www.bemyeyes.com (last visited June 20, 2025).

[565] Seeing AI, Microsoft Corporation, available at: https://www.microsoft.com/en-us/ai/seeing-ai (last visited June 20, 2025).

2.Expand Access to Affordable Assistive Technologies:

Launch public-private initiatives to subsidize or distribute cost-effective assistive devices and software, ensuring that economically weaker sections among PwDs are not excluded from digital inclusion.

3.Invest in Capacity Building and Awareness:

Conduct nationwide training for educators, developers, and public officials on inclusive ICT practices, and raise awareness among PwDs about available tools, rights, and services to promote independent and informed use of technology.