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Digital Divide and The Right to Education in India: Constitutional Challenges in The Post-Pandemic Era

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I. INTRODUCTION

The COVID-19 pandemic significantly transformed the global ambit of education, contributing to a shift from the traditional classroom teaching pattern to a digital and modernized teaching pattern. While digital learning offered continuity, this transition resulted in a structural form of inequality, as millions of students, especially from rural and marginalized communities, were excluded due to a lack of access to digital devices or stable internet connectivity.

The need of the hour is to address the digital gap faced by government institutions, which suffer from insufficient funds and a lack of proper teaching staff. While Article 21(A) of the Indian Constitution guarantees free and compulsory education for children aged 6 to 14 years, the practical implementation of this right is essential for actual progressive growth. This requires the proper setup of digital devices and stable internet connectivity in government school locations. Just physical classroom teaching is insufficient for student skill development and education, as education is now predominantly delivered through a digital mode. The competency gap in education between government and private schools creates a violation of the opportunity for equal development in education for students.

This paper seeks to explain whether the digital division created by the COVID emergency's impact on the Right to Education (RTE) violates this right for students, particularly as the quality of education has not improved according to current education trends.

II. CONSTITUTIONAL BACKGROUND OF ARTICLE 21 (A)

The Right to Education (RTE), though now a fundamental right, was not originally included in the scope of fundamental rights in 1950. Instead, it was placed under the Directive Principles of State Policy (DPSP) in Article 45. Article 45 stated that it was the State's obligation to provide free education to all children until the age of 14, within ten years after the commencement of the Constitution. Since DPSPs were non-justiciable, this right remained without governmental attention for decades.

A turning point came with the judicial expansion of the ambit of Article 21 (Right to Life and Personal Liberty). In the early 1970s, the Supreme Court interpreted the meaning of "life" to include all rights essential for an individual to live a life with dignity. This evolution established that education is a fundamental contributor to a citizen's dignified life, as educational skills make citizens more employable and able to provide for their needs.

Landmark Supreme Court judgments granted the RTE the status of a fundamental right:

Mohini Jain v. State of Karnataka (1992): The Supreme Court held that the right to education is an integral part of the right to life under Article 21. The Court ruled that education cannot be denied to anyone, laying the foundation for the RTE under Article 21.

Unni Krishnan v. State of Andhra Pradesh (1993): The Court refined the principle from Mohini Jain, holding that the Right to Education is a fundamental right but is limitedly available to children until 14 years of age. Education beyond this age would depend completely upon the State's economic capacity and other developmental factors. Most importantly, it established the State's obligation to provide free and compulsory education for children up to 14 years of age.

These judgments transformed education from a mere directive principle to a fundamental component for a citizen's life of dignity under the ambit of Article 21.

To provide constitutional legitimacy, the 86th Constitutional Amendment Act (2002) inserted Article 21(A) into the Fundamental Rights group. This

article explicitly guarantees that the State shall provide free and compulsory education for all children between the age group of 6 to 14 years. This amendment also transformed the main ambit of Article 45, which is now meant for early childhood care.

Following this, the Right of Children to Free and Compulsory Education Act (2009) [RTE Act] was enacted, giving operational and functional effect to Article 21(A) by prescribing standards for school functioning and universal access to education. The RTE Act mandates free elementary education for all children belonging to the 6-14 years age group. It requires schools to fulfils norms subjected to: pupil-teacher ratios, strict qualification criteria for teachers, proper infrastructure of schools, and recording student learning outcomes for assessment. The Act also imposes duties on the government, local authorities, and private schools to ensure everyone gets proper chances to receive education. Notably, there is a 25% reservation for the disadvantaged section of society to ensure equitable and non- discriminatory access to quality education. This provides greater social inclusion and helps in eliminating systematic inequalities.

Together, these provisions establish the RTE as a practical, justiciable, enforceable, and fair constitutional right.

III. RESEARCH HYPOTHESIS

HYPOTHESIS: The presence of a digital divide in India has substantially compromised the realization of the effectiveness of the Right to Education (Article 21A). This is because children living in digitally advanced Tier 1 cities receive superior educational opportunities, measured through facilities like online teaching methodology, digital infrastructure, competency testing of teachers, and student learning outcomes, compared to children living in Tier 2 cities. This systematic disparity amounts to indirect discrimination of education and learning opportunities, violating the constitutional guarantee and mandate of Article 21A's function of equal and meaningful access to education.

This hypothesis assumes that the contemporary educational environment has transformed post-pandemic, making access to digital tools, reliable internet connectivity, and technologically sound classrooms foundational for accessing even basic education, rather than supplementary. Consequently, Tier 2 cities face a positional disadvantage due to inadequate internet connectivity, digital literacy rates, and infrastructure.

The hypothesis intends to explain that this digital disparity is not merely based on socio-economic effects but is a constitutional safeguard issue, as the State's failure to ensure digital readiness across all regions directly results in educational inequality, contrary to constitutional provisions like Article 14, 21, and 21A.

Case studies comparing Tier 1 and Tier 2 cities will reflect this inequality due to factors like school digital infrastructure, student performance in hybrid mode, and connectivity, leading to unfair learning experiences. Centralizing this, the State must prioritize digital access to education as a vital component in ensuring that the Right to Free and Compulsory Education is actually justiciable and fundamental to everyone.

IV. DIMENSIONS AND EDUCATIONAL IMPACTS

The digital divide in India is a multilayered and persistent disparity in access to Information and Communication Technologies (ICTs) that goes beyond mere possession of a device. It encompasses variations in connectivity quality, device adequacy, digital literacy, socio-economic capability, and institutional infrastructure. All these factors directly influence an individual's ability to participate in digital learning environments.

The divide became starkly visible during the COVID-19 pandemic’s abrupt transition to online and hybrid teaching modes. The shift exposed technological gaps, transforming them into structural barriers that determined whether a child could continue schooling at all. In urban Tier 1 cities, robust digital infrastructure enabled continued learning. Conversely, in Tier 2, semi-urban, and rural regions, device scarcity, unstable connectivity, and lack of digital literacy resulted in large-scale learning disruptions. Post-pandemic, digital access has become a defining prerequisite for educational continuity, academic performance, and long-term opportunities. Consequently, digital inequality has evolved into a new axis of educational exclusion, reinforcing existing socio-economic, geographic, and gender-

based inequalities within India's schooling system.

A. ECONOMIC DIMENSION

The economic dimension is the most visible and entrenched barrier to educational equality. Access to digital learning is fundamentally shaped by a household's purchasing power, as acquiring devices (smartphones, laptops, tablets) and stable internet involves recurring expenses often unaffordable for low-income families. The issue is acute in households where multiple school-going children share a single device, leading to reduced learning hours and inconsistent class attendance. According to the National Sample Survey Office (NSSO) Household Consumption Expenditure and ICT Access Report (2021), only 11 per cent of households in the lowest income quintile owned a smartphone, while ownership in the highest quintile exceeded 70 per cent. The financial strain is further aggravated by the recurring cost of mobile data, which consumes a disproportionately large share of income for poorer households. Therefore, the economic divide acts as an entrenched socio-economic barrier, restricting educational opportunities and widening inter-class disparities in learning outcomes.

B. GEOGRAPHIC DIMENSION

The geographic dimension is one of the most persistent structural barriers to educational equality. Tier 1 Urban Centres (Mumbai, Delhi, Bengaluru, Hyderabad) benefit from dense network infrastructure and high-speed broadband. In contrast, Tier 2 and rural regions struggle with unreliable connectivity, low bandwidth, and limited penetration of fibre-optic networks. Government reports consistently highlight that rural internet penetration significantly lags behind urban regions. The 2023-24 NSSO survey indicates that while nearly 72% of urban households report internet access, only 38% of rural households do so. This disparity widens when examining "functional access," where electricity outages, slow internet speed, and poor availability of computer laboratories severely hinder digital learning. The result is a widening academic gap, as Tier 1 students experience continuous and enriched academic engagement, while students in Tier 2 and rural areas often miss live classes or depend on intermittent offline teaching.

C. GENDER DISCRIMINATION DIMENSION

The gender discrimination dimension reveals entrenched social and cultural barriers that systematically restrict girls' access to devices and digital learning environments. Studies demonstrate that girls face lower rates of smartphone ownership, more restricted internet use, and lower participation in digital skill training programs. The UNESCO State of Gender Equality Report (2021) found that Indian girls are 25% less likely to own a mobile phone and 33% less likely to have independent internet access compared to boys. This discrepancy is sociological, often stemming from concerns about "online safety," patriarchal norms, and the prioritization of boys' education. During the COVID-19 lockdowns, field surveys reported that girls were frequently denied device time even when a smartphone was available, due to domestic workload expectations or male-preference norms. Consequently, girls experienced higher rates of learning loss, class discontinuation, and reduced participation.

D. CASTE AND LINGUISTIC DIMENSION

The digital divide is deepened by caste-based and linguistic disparities. Students from Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC) face structural disadvantages due to historical socio-economic exclusion and residence in under-served regions. Schools in SC/ST- dominated areas disproportionately lack computer laboratories, broadband connections, and trained ICT teachers. Even when digital initiatives reach these regions, marginalized students often lack the home environment or devices needed to fully utilize them. Linguistic inequity adds another layer of exclusion. A significant portion of digital educational content is available primarily in English or a few dominant regional languages, causing students from tribal communities or vernacular-medium backgrounds to encounter significant learning barriers. The absence of culturally-responsive pedagogical content widens the educational distance between elite urban institutions and government-run schools in Tier 2 or rural areas.

E. CASE STUDY

Schooling Quality In Urban V/S Rural Areas Teaching System Approach (In Maharastra)

The contrast between educational access in urban and rural Maharashtra during the digital transition illustrates the structural nature of the digital divide and its profound constitutional implications.

Urban (Tier 1): In Mumbai, a Tier-1 metropolitan city, a 2021 survey revealed that approximately 85% of students were able to attend virtual classes regularly. Schools benefited from existing infrastructure, computer labs, teacher training, and stable internet.

Rural (Tier 2): In stark contrast, districts like Gadchiroli, Nandurbar, Beed, and Osmanabad exposed a staggering gap in digital readiness. Student participation in online classes was often below 20%, primarily due to a severe lack of device ownership and unreliable internet connectivity. Many villages faced frequent power outages, 2G-level network speeds, and limited mobile tower coverage, making real-time online learning practically impossible.

Rural teachers often lacked access to personal digital devices or sufficient training in using online platforms, compelling them to rely on WhatsApp messages or printed worksheets. Teacher capacity created a double burden, widening the proficiency gap.

Economic barriers further deepened the divide. A teacher from Beed district reported that students dropped out because their families could not afford the regular data recharges required for video-based learning. In several households, a single smartphone was shared among multiple siblings, forcing students to rotate class attendance or miss classes regularly. Education became contingent on parents' employment patterns; if the parent took the phone to work, the child could not attend class. In many villages, students were compelled to climb hills or walk kilometres to access mobile signals.

A study by the Tata Institute of Social Sciences (TISS) revealed that learning levels of rural students in Maharashtra regressed by nearly one academic year due to the digital divide, while urban students maintained or moderately improved their competencies. The Maharashtra case demonstrates that: Digital exclusion results in substantive inequality, undermining the constitutional promise of equal educational opportunity. The digital divide transforms existing socio-economic inequalities into structural educational inequality, violating Article 21A and the overarching principles of Articles 14 and 38 of the Constitution. The inability of rural students to access online education effectively renders the guarantee of free and compulsory education under Article 21A an empty promise.

V. CONCLUSION

The digital divide in India has transformed from a technological concern into a structural constitutional problem, fundamentally reshaping how the Right to Education (RTE) under Article 21A is interpreted and implemented. Meaningful access to digital tools has become inseparable from the ability to access education itself. The research demonstrates that the divide is not merely a gap in technology, but a gap in rights, where socio-economic inequality translates into educational exclusion.

The comparative analysis between Tier 1 and Tier 2 rural regions highlights a deepening inequality in educational outcomes. While Tier 1 cities benefit from robust infrastructure, underserved regions struggle with patchy networks, unstable electricity, and unaffordable devices. These disparities directly undermine the constitutional promise of free and compulsory education. The Maharashtra case showed participation levels above 80% in Mumbai versus below 20% in districts like Nandurbar, revealing a severe collapse of educational continuity.

The digital divide is multidimensional, shaped by economic, geographic, gender-based, caste-based, and linguistic factors, with each dimension compounding the others. Structural exclusion, such as that faced by a rural girl from a low-income Dalit household, creates what scholars describe as indirect discrimination, violating Articles 14, 15, and 21A simultaneously. The constitutional vision of equality of opportunity cannot be realized when digital capability becomes a precondition for learning and is unevenly distributed along socio-economic lines.

Judicial trends are evolving, with courts acknowledging the importance of internet access for dignity and liberty. However, systemic reform cannot rely on litigation alone. The State bears a proactive obligation—under Articles 38 and 46—to reduce inequalities and protect vulnerable groups.

Ultimately, bridging the digital divide is no longer optional—it is a constitutional imperative. Without digital inclusion, the promise of Article 21A remains hollow for millions of children across India. The State’s commitment to the Right to Education must evolve with technological realities, ensuring every child has equal and meaningful access to learning in the digital age.

VI. SUGGESTION

To effectively address the digital divide and ensure the meaningful realization of Article 21A, the State should adopt the following strategies:

- Expand Digital Infrastructure: Prioritize large-scale expansion in Tier 2 and rural regions through accelerated implementation of Bharat Net, community Wi-Fi hubs, and uninterrupted electricity supply. Public–private partnerships should be leveraged for affordable, high-speed internet for schools.
- Subsidize Devices and Infrastructure: Government schemes should include subsidized or free provision of tablets, laptops, or shared digital learning devices for students from low-income families. Schools in Tier 2 and rural areas must be equipped with computer labs, digital classrooms, and solar-powered charging facilities.
- Mandatory Digital Pedagogy Training: Teacher training programs should be redesigned to incorporate mandatory digital pedagogy modules. Digital literacy workshops for students, parents, and teachers—especially in marginalized communities—will ensure technology is usable and meaningful.
- Develop Multilingual and Inclusive Content: E-learning platforms must expand content in regional languages and adopt inclusive, culturally sensitive materials to reduce linguistic exclusion for first-generation learners.
- Enhance Monitoring and Accountability: A centralized monitoring system should evaluate school-level digital readiness and track digital participation rates across Tier 1 and Tier 2 areas. Regular government audits and transparent reporting can narrow the regional digital gap.
- Constitutional Recognition of Digital Access: Courts and policymakers should explicitly recognize digital access as an essential component of Article 21A. This recognition would compel the State to incorporate digital infrastructure into the core definition of "free and compulsory education," ensuring stronger constitutional enforcement.

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