



Ed-Tech

This article is based on [“The future of learning in India is ed-tech”](#) which was published in the Indian Express on 30/06/2021. It talks about the need & challenges associated with the use of technology in education or Ed-Tech.

India’s school education landscape is facing [daunting challenges](#). The country was reeling under an acute learning crisis, even before the Covid-19 pandemic, as reflected by successive [ASER surveys](#).

The pandemic threatens to exacerbate this crisis, especially because of the physical closure of 15.5 lakh schools that has affected more than 248 million students for over a year.

Combined with this learning crisis, the emergence of the [Fourth Industrial Revolution](#) has made it imperative to reimagine education and align it with the unprecedented technological transformation.

Need & Opportunities For Ed-Tech

- **Intended Benefits of Ed-Tech:** Technology holds promise and has incredible potential in:
 - Enabling greater personalisation of education
 - Enhancing educational productivity by improving rates of learning,
 - Reducing costs of instructional material and service delivery at scale
 - Better utilisation of teacher/instructor time.
- **Need Induced By Pandemic:** Further, as traditional brick-and-mortar service delivery models are being disrupted across sectors, the pandemic offers a critical, yet stark, reminder of the impending need to weave technology into education.
- **National Education Policy 2020:** India’s new National Education Policy (NEP) 2020 is responsive to the clarion call to integrate technology at every level of instruction.
 - It envisions the establishment of an autonomous body, the National Education Technology Forum (NETF), to spearhead efforts towards providing a strategic thrust to the deployment and use of technology.
- **Promise of Ed-Tech:** The Indian ed-tech ecosystem has a lot of potential for innovation. With over 4,500 start-ups and a current valuation of around \$700 million, the market is geared for exponential growth — estimates project an astounding market size of \$30 billion in the next 10 years
- **Steps Taken by the Government:** India is well-poised to take this leap forward with increasing access to tech-based infrastructure, electricity, and affordable internet connectivity, fueled by flagship programmes such as [Digital India](#) and [DIKSHA \(Digital Infrastructure for School Education\)](#).
 - Government of [India’s Aspirational Districts Programme](#) on tech-enabled monitoring and implementation that emphasises citizen engagement, partnerships and effective service delivery.

Several examples of grassroots innovation in Ed-Tech.

- The Hamara Vidhyalaya in Namsai district, Arunachal Pradesh, is fostering tech-based performance assessments;
- Assam's online career guidance portal is strengthening school-to-work and higher-education transition for students in grades 9 to 12;
- Samarth in Gujarat is facilitating the online professional development of lakhs of teachers in collaboration with IIM-Ahmedabad;
- Jharkhand's DigiSATH is spearheading behaviour change by establishing stronger parent-teacher-student linkages;
- Himachal Pradesh's HarGhar Pathshala is providing digital education for children with special needs;
- Uttarakhand's community radio is promoting early reading through byte-size broadcasts;
- Madhya Pradesh's DigiLEP is delivering content for learning enhancement through a well-structured mechanism with over 50,000 WhatsApp groups covering all clusters and secondary schools;
- Kerala's Aksharavriksham initiative is focusing on digital "edutainment" to support learning and skill development via games and activities.

Associated Issues With Ed-Tech

- **Lack of Technology Access:** Not everyone who can afford to go to school can afford to have phones, computers, or even a quality internet connection for attending classes online.
 - According to National Sample Survey data for 2017-18, only 42 percent of urban and 15 percent of rural households had internet access.
 - In this case, Ed-tech can increase the already existing digital divide.
- **In Contradiction with Right to Education:** Technology is not affordable to all, shifting towards online education completely is like taking away the [Right to Education](#) of those who cannot access the technology.
 - Moreover, the National Education Policy 2020 that talks about the digitization of education is also in contradiction with the right to education.

Way Forward

- **Comprehensive Ed-tech Policy:** A comprehensive Ed-tech policy architecture must focus on four key elements-
 - Providing access to learning, especially to disadvantaged groups;
 - Enabling processes of teaching, learning, and evaluation;
 - Facilitating teacher training and continuous professional development;
 - Improving governance systems including planning, management, and monitoring processes.
- **Technology is a Tool, Not a Panacea:** Public educational institutions play an exemplary role in social inclusion and relative equality.
 - It is the place where people of all genders, classes, castes, and communities can meet without one group being forced to bow to others.
 - Therefore, technology cannot substitute schools or replace teachers. Thus, it should not be "teachers versus technology" rather "teachers and technology".
- **Providing Infrastructure for Ed-Tech:** In the immediate term, there must be a mechanism to thoroughly map the ed-tech landscape, especially their scale, reach, and impact.
 - The focus should be on access, equity, infrastructure, governance, and quality-related outcomes and challenges for teachers and students.

- Special attention must be paid to address the digital divide at two levels — access and skills to effectively use technology and leverage its benefits.
- **Cross-Platform Integration:** In the short to medium-term, the policy formulation and planning process must strive to enable convergence across schemes (education, skills, digital governance, and finance)
 - There is also a need to foster integration of solutions through public-private partnerships, factor in voices of all stakeholders, and bolster cooperative federalism across all levels of government.
- **Replicating Success Models:** In the longer term, as policy translates to practice at local levels and technology-based solutions become ubiquitous, a repository of the best-in-class technology solutions, good practices and lessons from successful implementation must be curated.
 - The [NITI Aayog's India Knowledge Hub](#) and the Ministry of Education's DIKSHA and ShaGun platforms can facilitate and amplify such learning.

Conclusion

The journey from a holistic strategy to its successful application will, no doubt, be a long one. It requires careful planning, sustained implementation, and calculated course corrections. With NEP 2020 having set the ball rolling, a transformative ed-tech policy architecture is the need of the hour to effectively maximise student learning.

Drishti Mains Question

The pandemic-induced learning crisis and the Fourth Industrial Revolution have made it necessary to reimagine education and align it with the unprecedented technological transformation. Discuss.