Education Technology in India

This editorial is based on **"The Indian edtech industry is taking India to the world",** which was published in Livemint on 10/08/2022. It talks about the Education Technology in India and challenges related to it.

For Prelims: EdTech, Digital Education, Gender Gap, Artificial Intelligence (AI), National AI Resource Platform (NAIRP), Discussion Forum of Online Teaching (DFOT)

For Mains: Significance of EdTech for India, Challenges Associated With EdTech, Recent Grassroot Innovative EdTech Programmes in India

In the last few years, the Edtech **(Education + Technology) Industry** in India has **grown exponentially**, especially at the time of **Covid-19 pandemic**.

The **one-size-fits-all conventional model of education** has long been a thorn in **teachers, parents, and students' sides,** however **Edtech provides individualised classes** and brings to students a host of options for interactive learning.

But **only 1 in 4 students in India has access to** digital learning. Though **edtech solutions** for virtual learning are growing, they are **still out of reach for the millions of families** due to various reasons.

What is the Significance of EdTech for India?

- **Interactive and Innovative Learning:** Learning online with lectures, **multimedia graphics, and interactive elements** makes learning more **engaging,** and reinforces learning concepts with a visual approach.
    - India's edtech boom also stems from facts like the **prevalence of enthusiastic entrepreneurs adopting a multicultural approach to suit the needs of a diverse country,** developing innovative products and approaches.
- **Need of On-Demand Learning:** Students who were not compatible with the **traditional school system's rigid timetables** can get access to quality education from their home. **Especially competitive exam candidates** often juggle **work and studies simultaneously.**
    - It is not often that classroom timings are aligned to their work schedule. On-demand training turns the table in students' favour **enabling them to access courses and study materials on demand anywhere, anytime and through any medium.**
- **Educators Availability:** In the past, a single professor could handle at most a batch of 100 students.
    - EdTech enables educators to make themselves **available to a huge population of students.**
        - The **need for a physical space** where students and teachers can assemble for

classroom sessions is **no longer needed.**

- **Personalized Evaluation**: Students receive **personalized recommendations** based on data on their previous learning patterns and performance.
    - **Students who need extra support** and benefit from a slower learning pace could **receive the appropriate care.**
- **Remove Age Barriers:** Online programs and courses allow people of **any age group to learn at their own pace**, without inhibitions, and without compromising on their other commitments, **which were not available at their time.**
- **Equitable Chances and Reduced Pay-Wall:** India's edtech industry could slowly **bridge the education-quality gap between the rich and the poor,** giving Indians from all backgrounds more equitable chances of success.
    - The **cost-effectiveness of edtech allows students to overcome the paywall between them and premium educators**, and the virtual nature of this learning erases geographical constraints.

What are the Challenges Associated with EdTech?

- **Limited Practical Attachment to Learning:** Subjects of Science and technology include **hands-on laboratory sessions, dissertation projects** and **field trips** to complement theoretical studies.
    - This aspect of learning is severely limited in online education.
- **Limited Social Skill Enhancement: Education is not just about subject knowledge but also about developing** social skills **and sportsmanship** among the students, which is built over the years.
    - Relying solely on online education may **hinder the holistic development** of children, and many may underperform later in their professional and personal lives.
- **Lack of Digital Infrastructure**: While India enjoys a wide geographic and cultural diversity, it also suffers from a huge **socio-economic divide,** including **non-uniformity of digital infrastructure facilities.**
    - **Interrupted power supply and weak or non-existent internet connectivity** are major challenges **hindering the percolation of online education at the grassroot.**
- **Widening Gender Inequality:** Online education may lead to a wider **gender gap.**
    - In a recent survey of 733 students studying in government schools in Bihar, **only 28% of the girls had smartphones in their homes, in contrast to 36% of the boys.**
        - However, **girls were found to spend a disproportionately longer time on household chores than boys,** which often overlapped with the time of telecast of these lessons.
- **Business Malpractice:** With the **growing market for** digital education, Edtech companies are likely to engage in various forms of business malpractice **to attract consumers.**
    - Most recently, issues of **misleading advertisements** and unfair trade practices have come to light.
    - **The Department of School Education and Literacy** stated that ed-tech companies are luring parents in the garb of offering free services and getting the **Electronic Fund Transfer (EFT)** Mandate signed or **activating the** auto-debit feature**,** especially targeting vulnerable families.
- **Educator-Learner Adaptability Concern:** Using the internet for entertainment is common, but for online lessons is a big challenge.
    - **Teachers may not be well-versed with creating digital content**, and conveying it effectively online.
    - Similarly, a sudden expectation from them to upgrade, and from students to adapt, is unfair.

What are the Recent Grassroot Innovative EdTech Programmes in India?

- **Assam's online career guidance portal** is strengthening school-to-work and higher-education transition for students in grades 9 to 12.
- **Jharkhand's DigiSAT** 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.

- **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.

What Should be the Way Forward?

- **Bridging the Digital Divide**: It is essential to bridge the existing **digital divide** in India in order to expand online learning.
    - The **Government School Transformation Programme Odisha** under the **5T** initiative **(Transparency, Teamwork, Technology, and Timeliness leading to Transformation)** of the **Odisha government** is a good step in this direction.
- **Inclusive Education Policy:** There is a global recognition of the need for inclusive education policies during the pandemic.
    - The **development of online resources, training programs, and innovative schemes** is essential for making online education more effective, accessible, and safe.
        - The teaching community has come together to form a nationwide informal and voluntary network of teachers, called the **Discussion Forum of Online Teaching (DFOT) is a good step in this direction.**
- **Utilisation of Cutting-Edge Technologies:** Cutting-edge technologies like **artificial intelligence (AI)** could open new possibilities for **innovative and personalised approaches** catering to different learning abilities.
    - **IIT Kharagpur** has collaborated with **Amazon Web Services** to develop the **National AI Resource Platform (NAIRP)**, the future possibilities of which include **monitoring eye movement, motion and other parameters for better teaching** and learning.
- **Towards - "What is Told is What is Sold":** Apart from stressing on transparency and warning against misleading ads of edtech companies, there is need for **a proper mechanism for monitoring malpractices** and **time bound grievance redressal.**
- **Hybrid Mode of Learning: Edtech is not a magic wand** that can solve the learning crisis in India. **Neither is it a replacement for teachers in schools, both online and offline learning should be balanced.**
    - Major online players like **Byju's** and **Unacademy** have forayed offline or **hybrid learning models.**

Conclusion

Despite the fact that online education opens many possibilities for both students and teachers, it can also widen social inequalities in India. With regard to online education, we must ensure that all our policies and interventions are **inclusive.** India will lead the way ahead with **good vision** and **sincere efforts.**

Drishti Mains Question

"Despite the fact that online education opens many possibilities for both students and teachers, it can also widen social inequalities in India." Explain.