NEXT IAS

DAILY EDITORIAL ANALYSIS

TOPIC

DIGITAL PUSH IN CLASSROOMS

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Context

- Technological advancements, such as the complete switchover to digital systems, reveal the unintended consequences of over-reliance on artificial intelligence (AI) and digital tools.

India's Digital Push

- India's ambitious digital transformation in education — accelerated by the pandemic and sustained by policy — has undeniably reshaped classrooms.
- India's digital push democratizes learning from smartboards and tablets to online assessments and virtual learning platforms.

Vision and Policy Framework

- The digital education drive is anchored in the **Digital India initiative** and reinforced by the **National Education Policy (NEP) 2020**, which emphasizes:
  - Equitable access to technology;
  - Multilingual digital content;
  - Teacher empowerment through ICT;
  - Integration of AI and emerging tech in pedagogy;
- **Role of AI and EdTech:** AI is reshaping classrooms by:
  - Assisting teachers with lesson planning and assessments;
  - Offering personalized learning paths based on student performance;
  - Supporting regional language content for inclusivity.
- In Bengaluru, **AI-enabled voice tools like Tara** are helping first-generation learners improve English skills, showing how tech can complement traditional teaching.

Key Efforts: Digital Push in Education

- **Union Budget (2025):** It reinforced India's commitment to emerging technologies:
  - 500 crore allocated for AI in education;
  - 10,000 fellowships for deep-tech research;
  - Expansion of Atal Tinkering Labs and Centres of Excellence.
  - Additionally, over 56,000 smart classrooms and 2,600+ computer labs have been set up in government schools to strengthen digital infrastructure.
- **Digital India:** It is aimed to bridge the digital divide and make technology a tool for inclusive development, from rural villages to urban metros. It was conceived with three core objectives:
  - Digital Infrastructure as a Utility to Every Citizen;
  - Governance and Services on Demand;
  - Digital Empowerment of Citizens;
- Other efforts like PM e-Vidya Programme, DIKSHA, SWAYAM, ePathshala, NISHTHA, *and* Atal Tinkering Labs fuel the digital push for education in India.

Challenges and Gaps

- **Digital & Access Divide:** Only 32.4% of schools have functional computers; rural areas lag behind.
  - Millions of students still lack access to smartphones, laptops, or reliable internet.
  - **ASER Survey (2021)** found that nearly 30% of students in rural India had no access to a smartphone at home.
- **Infrastructural Deficits:** Many schools lack basic amenities like safe classrooms and toilets.
  - Erratic power supply and poor network coverage make digital learning inconsistent, even when devices are available.
- **Language and Literacy Barriers:** Many platforms are English-centric, leaving non-English speakers and first-generation learners struggling to engage.

- **Teacher Training:** Limited ICT training hampers effective tech integration.
- **Data Privacy:** Concerns over student data collection and AI surveillance remain

Empathy Deficit: When Tech Overshadows Human Connection

- Education is about connection, care, and understanding, along with content delivery.
  - Empathy, once the cornerstone of good teaching, risks being sidelined in the race for digital efficiency.
- **Teacher-Student Disconnect:** Virtual platforms limit spontaneous interactions, making it harder for teachers to gauge emotional cues or offer personalized support.
- **Mental Health Strain:** Isolation, screen fatigue, and pressure to perform digitally have taken a toll on students' mental well-being.
- **One-Size-Fits-All Approach:** Algorithms and standardized modules often ignore individual learning styles, cultural contexts, and emotional needs.

Case Study: Hidden Cost of Digital-First Approach

- **Maharashtra Anganwadi Case:** An Anganwadi in Maharashtra **recently introduced AI-powered equipment and digital devices** to aid early learning. A three years old child confidently used an interactive smart board, while another explored a virtual jungle via an AI headset
  - However, such initiatives **risk detaching young children from real-world** experiences vital for cognitive and emotional growth.
  - Early childhood education already suffers from low priority; replacing relational, sensory-based learning with virtual tools could erode developmental foundations.
- **Impact on Teachers:** From pre-school to university, digital solutions are reshaping education, often diminishing teachers' professional autonomy.
  - Limited training and systemic neglect mean that teachers are increasingly sidelined in favor of automated systems, further weakening the education ecosystem.

Way Forward: Rethinking the Digital Push

- **Hybrid Models:** Blending digital tools with traditional teaching can ensure inclusivity and preserve human connection.
- **Localized Content:** Platforms must offer multilingual, culturally relevant material to engage diverse learners.
- **Teacher Training in Empathy:** Digital literacy should go hand-in-hand with emotional intelligence training for educators.
- **Community-Based Access:** Shared digital hubs in villages and urban slums can democratize access where personal devices are scarce.

Source: IE

Mains Practice Question

Q. Critically examine how the digital push in classrooms has impacted both access to education and the emotional connection between teachers and students.

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