Emerging Technologies: Transforming India's Education Sector

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Topics

- Context
- Research Findings
- Challenges
- Looking Forward
India’s adoption of Emerging technology

- India’s foray to online platforms and MOOC about 10 years back was the beginning of the evolution of EdTech
- Interest by startup companies and entrepreneurs has exploded in the last 5 years
- Government’s policy to education is focused on expanding the availability to the rural sector and increasing the gross enrollment ratio
- Educators remain steeped in traditional pedagogy
- Current focus is on the spread and reach than on assessment and impact
India’s history with education

• Takshashila (Taxila) Oldest University was established between 500 BC and 600 AD in ancient India and now in Pakistan

• Nalanda University established between 500 AD and 1300 AD. In 2010, it was re-established as a functioning graduate research university
Fast forward to today

• Largest youth population in the world ~ 600 million

• 28% of the population is under the age of 14

• There are over 1.5 million schools, over 900 Universities, 50,000 colleges and stand alone educational institutions, and 10 million teachers in India

• Out of approx. 185 million in higher education, about 2 million are enrolled through distance education

• Gross Enrollment Ratio drops from about 80% in Tenth grade to about 56% by Class 12, and then drops even further to about 26% at the higher education level

• Shortage of teachers, access, economic conditions, and disinterest contributes to the precipitous fall
Research

• Focus on the influencers of student’s adoption of Emerging Technology

• Startup companies have been the catalyst initiating the transformation

• Government policies and structural reforms have been progressive, but implementation has been patchy

• Educators and Administrators have had very little impact on the adoption
Research findings - Entrepreneurs
Research findings - Entrepreneurs

• Indian Education industry is at $100 bn and expected to nearly double to $180bn by 2020

• Online education industry is expected to hit about $2 bn by 2021

• Five key business models that are growing are: K-12 Supplementary education, test preparation, reskilling and online certifications, higher education and languages, and casual learning

• There are over 3,600 EdTech startups

• Bangalore and Delhi Capital region are in the top 15 cities in the world

• AR/VR, Blockchain, Simulation labs, gamification and STEM Labs are the most prominent forms of technology applications used
Research findings - Entrepreneurs
Research findings - Government

- $13.5 bn allocated for education budget in 2019 – a 10% increase over previous year

- $14bn allocated for Revitalising Infrastructure and Systems in Education (RISE) by 2022

- A dedicated digital infrastructure for teachers, DIKSHA, has been developed with the aim to empower school teachers with access to innovative tech-based solutions

- Swayam is an online MOOC promoted by Government of India – it has video lectures, prepared reading material, self assessments, and on-line discussion forum

- NITI Aayog (Planning commission) has released a working paper on AI and its uses

- Strong Mid day meal scheme
Research findings - Government

• Draft National Education Policy of 2019: Policy for next 25+ years
  
  o Focus on Access, Equity, Quality, Affordability, and Accountability of the education system of the country
  
  o Increase the gross enrolment ratio, currently at just 26%, to 50% by 2035
  
  o Right to Education to cover all children from 3 to 18 years of age
  
  o A 5+3+3+4 curricular and pedagogical structure based on cognitive developmental stages of the children rather than their ages
  
  o Massive focus on Teacher Education and improvement of the quality of the educators. Multiple multidisciplinary programs for teachers.
  
  o Higher education will have 3 tiers – based on research and teaching demands
  
  o More liberal and comprehensive education system
  
  o Focus on artificial intelligence and machine learning, 3-D machining, big data analysis, genomic studies, biotechnology, nanotechnology and neuroscience
Research findings – Educators/Family

• Educators/administrators are more focused on:
  
  • Keeping children in school
  
  • Ensuring that mid day meal scheme is administered
  
  • Focus on basic infrastructure – tables and chairs, electricity, toilet etc.
  
  • Economic needs of the family
  
  • Lack of teachers
Challenges

• Local factors and job demands
• Structural changes in the assessment and impact on students
• Massive re-education of teachers and approach to teaching
• Access to quality and engaging content
• Affordability
Looking forward

- **Personalization, Collaboration, and Informalization** will be the key words that will drive content and delivery of EdTech.

- By 2021, online education in India is set to grow to around $2.0 bn and around 10 million users.

- Primary and secondary supplemental education to grow to around $775 million by 2021.

- Millennials will drive demand for more content based on gamification and AR/VR and personalized and continuous learning.

- Government’s policy in incentivizing educators and administrators to adopt a more
Key Takeaways

• There is expected to be a significant growth in EdTech sector over the next five years

• India is looking to foreign investment in the area of EdTech

• Content creation is the key to building a scalable and sustainable program

• Major emphasis on teacher education programs undertaken by the Government of India
Thank You!

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