EDTECH 2023: ROAD AHEAD
"Edtech" or "Technology in Education" are not new terms in the business world. The sector has undergone significant evolution over the years, and it has rapidly progressed during the pandemic. With the flourishing startup ecosystem, the growing digital population, and innovative minds constructing new services, the edtech sector has gained considerable momentum in recent times. However, as the world started adapting to the post-pandemic scenario, the sector encountered certain challenges that resulted in a reversion to traditional learning methodologies. While smaller startups continue to gain traction and funding, a shift in focus towards profitability and sustainability has prompted the restructuring of larger players such as Byju's, Unacademy, and others. Multiple newer models are emerging, making the future of India's US$ 2B edtech industry intriguing. This report presents emerging trends in the Indian online education sector, from its evolution to future prospects as a business opportunity for new and existing entrepreneurs. Trends such as "pay after placement" are creating numerous opportunities for students to pursue higher education. Several new players are exploring hybrid business models to capitalize on the advantages of both offline and online learning, while existing players are shifting their focus to omnichannel models as an increasing number of K12 and test preparation edtech players expand through offline centers. New technologies like AI, AR, and others are utilized to enhance the learning and teaching experience. At 1Lattice, we are optimistic that the report will provide valuable insights, and we eagerly anticipate the opportunity to maintain an open dialogue with our friends across various industries. We look forward to exchanging notes and further discussing these matters as the situation continues to evolve.

Vaibhav Tamrakar
Executive Vice President

Praneet Singhal
Director
Key takeaways

- The Indian education market is expected to be a US$ 225B opportunity by 2025, with online/digital education (edtech) growing faster (~27%) to reach US$ 5.7B by 2025.

- Newer trends are emerging across the edtech ecosystem. Some of them are as follows:
  - Learners from non-metros demand high-quality faculty and content, which is driving higher enrolment on edtech apps.
  - Offline educational institutes are exploring online avenues to increase student / parental engagement and increase the convenience of learning.
  - Start-ups are providing an option of “pay after placement”, thereby providing more opportunities for students to pursue higher education.
  - Emergence of hybrid business models to leverage the advantages of both offline and online learning.
  - Edtech players are shifting their focus to omnichannel models as a higher number of K12 and test prep edtech players expand via offline centers.
  - Edtech players are experimenting with new technologies like AI, AR, etc. to enhance the experience of learners and teachers.
  - Tech adoption has enabled changes in the learning methods of students, thereby leading to the emergence of newer methods like “Micro and Nano Learning”, “Adaptive learning” and “Analytical learning”.
Indian education market is expected to be a US$ 225B opportunity by 2025, with online/digital education (edtech) growing faster (~27%) to reach US$ 5.7B by 2025

Indian edtech market is expected to grow at a CAGR of 27% to reach US$ 5.7B by FY25

<table>
<thead>
<tr>
<th>Overall education market in India (FY20-FY25P) (US$ B)</th>
<th>Increase in tech adoption and demand for learning will drive the growth of the edtech market</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY20: 131 (CAGR 12%)</td>
<td>Growth drivers</td>
</tr>
<tr>
<td>FY22E: 163 (CAGR 11%)</td>
<td>1. Rise in tech adoption</td>
</tr>
<tr>
<td>FY25P: 225</td>
<td>• Uptrend in internet penetration - expected 900M internet users by 2025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Edtech market in India (FY20-FY25P) (US$ B)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY20: 1.1 (CAGR 60%)</td>
<td>2. Increased budget allocation</td>
</tr>
<tr>
<td>FY22: 2.8 (CAGR 27%)</td>
<td>• GOI allocated US$ 8 billion to the Department of School Education and Literacy in the union budget 2022-23, which is an increase of 11% as compared to 2021-22</td>
</tr>
<tr>
<td>FY25P: 5.7</td>
<td>3. Fast growing segments</td>
</tr>
<tr>
<td></td>
<td>• Test prep - fastest growing (~50% from FY20 – 25P), to constitute 1/3rd share followed by K12</td>
</tr>
<tr>
<td></td>
<td>• Potential for nascent sub-segments like educational kits</td>
</tr>
<tr>
<td></td>
<td>• 1/4th share of investments in test prep space; upskilling, however, is highly funded at the seed stage</td>
</tr>
<tr>
<td></td>
<td>4. Demand for upskilling</td>
</tr>
<tr>
<td></td>
<td>• ~60% of employees demand courses for reskilling to become market ready, especially from tier 2 cities</td>
</tr>
<tr>
<td></td>
<td>• Higher ed students demand online upskilling courses to become employable</td>
</tr>
<tr>
<td></td>
<td>5. Government digital initiatives</td>
</tr>
<tr>
<td></td>
<td>• Initiatives like eVIDYA and e-Basta to add more students under digital learning umbrella</td>
</tr>
<tr>
<td></td>
<td>• Recent govt initiatives including EQUIP (2019-24), RISE (2022), and UGC’s LOCF are expected to improve the quality, accessibility, and infrastructure of higher education institutes</td>
</tr>
</tbody>
</table>

Source(s): Population Census, UNICEF, IBEF, Govt. data, Secondary research, 1Lattice analysis
Overall, education in India can be classified into 18 themes across 5 key segments:

<table>
<thead>
<tr>
<th>Early learning (Below 5 years)</th>
<th>K-12 (5-18 years)</th>
<th>Test prep (Above 16 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-schools</td>
<td>Supplementary education &amp; curriculum providers</td>
<td>Gamified learning</td>
</tr>
<tr>
<td>Educational kits &amp; toys</td>
<td>After school learning</td>
<td>New age learning</td>
</tr>
<tr>
<td>After school learning</td>
<td>Educational kits &amp; toys</td>
<td>After school learning</td>
</tr>
<tr>
<td>• Kindergarten, playgroups, Montessori schools, K-12 school chains consisting of preschool grades</td>
<td>• Tuition for course curriculum through e-tutoring (live and recorded)</td>
<td>• Career guidance</td>
</tr>
<tr>
<td>• Learning habits additional to school</td>
<td>• Extracurricular activity classes for sports, music, art and craft etc.</td>
<td>• Post school career planning</td>
</tr>
<tr>
<td>• One-stop provider of skill development</td>
<td>• Adaptive, personalized and multi-featured learning in a gamified format</td>
<td>• Coaching classes for competitive &amp; professional exams</td>
</tr>
<tr>
<td>• Related to motor, language, social, thinking, world skills, etc.</td>
<td>• Co-curricular activities like sports, martial arts, dance, music, yoga etc.</td>
<td>• E-tutoring via recorded &amp; live classes with doubt-solving</td>
</tr>
<tr>
<td>• Extracurricular activity classes for sports, music, art and craft etc.</td>
<td>• Home-schooling with open study resources</td>
<td></td>
</tr>
<tr>
<td>Higher education (18-25 years)</td>
<td>Financial Aid</td>
<td>Corporate learning</td>
</tr>
<tr>
<td>Degree / diploma courses</td>
<td>Education IT software</td>
<td></td>
</tr>
<tr>
<td>Upskilling &amp; professional service courses</td>
<td>• Financial support (e.g., education loans) to pursue higher education</td>
<td>• On the job learning programs for employees of a particular organisation to upgrade skillset</td>
</tr>
<tr>
<td>Extra-curricular</td>
<td>Career support and job search</td>
<td></td>
</tr>
<tr>
<td>• In demand skills certification programs either individually subscribed or through institute collaborations</td>
<td>• Career support for 18+ age group like internship leads, job application tips, advice etc.</td>
<td></td>
</tr>
<tr>
<td>• Courses pursued after graduation, having a duration of 1-3 years in specific subjects for attaining general / professional degrees</td>
<td>• Extracurricular activities including photography, music, design, DIY, marketing, entrepreneurship, art, etc.</td>
<td></td>
</tr>
<tr>
<td>• Hybrid learning courses including pay after placement</td>
<td>• Career support for 18+ age group like internship leads, job application tips, advice etc.</td>
<td></td>
</tr>
<tr>
<td>• Higher education and upskilling courses for college students (UG / PG) and white-collar working professionals</td>
<td>• Includes job vacancies, company reviews, interview preparation and tips for job seekers</td>
<td></td>
</tr>
<tr>
<td>• Ex: Data science, programming, Microsoft excel etc.</td>
<td>• Financial support (e.g., education loans) to pursue higher education</td>
<td></td>
</tr>
</tbody>
</table>

Source(s): Tracxn, Secondary Research, Company Websites, 1Lattice analysis

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Across these themes, newer trends are emerging within the Indian edtech space

- Learner demand from non-metros for high-quality faculty and content is driving higher enrolment on edtech apps
- Increase in # of students is expected to create demand for edtech solutions like upskilling and job-ready courses

- Edtech companies are experimenting with new technologies like AI, AR, etc. to enhance the learning experience of learners and teachers
- Gamification is deeply penetrated across major plays; it is interactive, promotes fun and offers real-time feedback to the learners

- Government policies are focusing on making youth career ready
- PM eVIDYA - for multi-mode digital/online education access
- Increase in budget allocation by 18% in the education sector from FY21 to FY22

- Online platforms expanding via offline centers as students return to old ways of learning (e.g., Unacademy, Vedantu, Physicswallah)
- Demand for edtech solutions fulfilled by players providing online infrastructure to aid a smooth shift from traditional to hybrid learning

- Decrease in investments and mandates to turn profitable has led to layoffs among key players in the edtech space
- While top edtech players continue to receive funding, investor focus has shifted to new/smaller start-ups
- Fundings in overseas education consulting start-ups increased by 3X

- New age education loan providers like Avanse registered ~3x increase in loan disbursals as compared to last year
- Multiple start-ups are providing an option of “pay after placement”, thereby opening avenues for students to pursue higher education
Learners from non-metros demand high quality faculty and content, which is driving higher enrolment on edtech apps

### Parameter

- **Demand from non-metro cities**
  - ~60% of competitive exam aspirants come from non-metros
  - ~80% enroll in online apps to access expert faculty classes

- **Aspirational parents / learners**
  - Increase in expenditure on early childcare, especially in Tier 2 and 3 cities
  - Demand for sub-segments - educational kits and toys driven by the importance of activity-based learning

### Description

- Online user base is expected to grow from 90M in FY20 to 133M by FY25
- Live class format preferred (T3 and below) or online learning with live doubt clearing
- Online education market in India to grow by 50% and reach $5B by the FY25
- Players like Shumee and Playshifu provide eco-friendly toys and tech-integrated activity boxes

### Current market scenario

- Online user base is expected to grow from 90M in FY20 to 133M by FY25
- Live class format preferred (T3 and below) or online learning with live doubt clearing
- Online education market in India to grow by 50% and reach $5B by the FY25
- Players like Shumee and Playshifu provide eco-friendly toys and tech-integrated activity boxes

### Key statistics

- ~40% non-metro parents prefer e-learning for their kids
- 216 million children (18% of India’s population)
- ~60% children in India (from 5-16 years) belong to non-metro
- ~75% enrolments in 2021 from non-metro, who have a smartphone
- ~$ 9.5 bn (ECCE edtech total available market potential)
- 17% (YoY growth in pre-school Enrolments, 2011-20)

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Edtech is still in flux and leaders will emerge in each area, but content may no longer be a differentiator. Rather, the focus should be on developing tools with effective features.

- Madhu Iyer, Rocketship.vc

Our focus is on localization of content in as many regional languages possible, making our platform accessible to public- and government-school students. Currently apart from English, we are available in six regional languages.

- Sandeep Bapna, Khan Academy

From 95% dropout rate on MOOCs to 95% completion rate, we have achieved this through live online format. With innovation in consumption format – live / semi-live, we expect sustainability in student engagement.

- Sriram Subramanian, Clever Harvey

Omidyar is supporting ACT Fund, working with tech startups and non-profits to increase access to quality edtech solutions in Tier 2 locations and low to middle income households.

- Sarvesh Kanodia, Omidyar Network

Source(s): Press reports, ASER 2021, Secondary research, 1Lattice IP, 1Lattice analysis

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The rising student count in higher education is expected to drive demand for edtech solutions in upskilling and job-ready courses.

<table>
<thead>
<tr>
<th>Growth in addressable student count</th>
</tr>
</thead>
</table>

### # students expected to grow at CAGR ~1% to reach 47M by FY25

<table>
<thead>
<tr>
<th>Year</th>
<th># of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>36</td>
</tr>
<tr>
<td>FY22</td>
<td>46</td>
</tr>
<tr>
<td>FY25P</td>
<td>47</td>
</tr>
</tbody>
</table>

### # colleges expected to increase by CAGR ~2% to reach 46K by FY25

<table>
<thead>
<tr>
<th>Year</th>
<th># of colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>40</td>
</tr>
<tr>
<td>FY22</td>
<td>44</td>
</tr>
<tr>
<td>FY25P</td>
<td>46</td>
</tr>
</tbody>
</table>

### Uptrend in # of students, colleges and universities is expected to create demand for edtech solutions

<table>
<thead>
<tr>
<th>Growth drivers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase in # students &amp; colleges</strong></td>
<td>• Rising primary education enrolments, with NER currently at 92.7% • Increase in colleges and students to drive enrolment for online upskilling and job-ready courses • Increase in nuclear families and working women – need for edtech solutions</td>
</tr>
<tr>
<td><strong>Higher accessibility</strong></td>
<td>• ~2.5M IIT and NEET aspirants from smaller cities due to lower cost and quality content • 624M active internet users in India as of Feb 21 • Approximately 60% of lower to middle-income students possess at least one smartphone • BYJU’s witnessed a 150% surge in new enrolments by providing free app access amid the lockdown</td>
</tr>
</tbody>
</table>

Source(s): AISHE 2019-20, MHRD, Secondary research, 1Lattice analysis
Shift in focus towards profitability and sustainability has led to restructuring of the workforce within organizations.

**Drop in the growth/ late-stage deals has impacted the overall funding in CY22**

<table>
<thead>
<tr>
<th>Year</th>
<th>YoY Funding Raised (US$ B)</th>
<th>No. of Deals</th>
<th>Avg. Deal Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2.2</td>
<td>73</td>
<td>US$ 30M</td>
</tr>
<tr>
<td>2021</td>
<td>5.8</td>
<td>163</td>
<td>US$ 36M</td>
</tr>
<tr>
<td>2022</td>
<td>2.6</td>
<td>98</td>
<td>US$ 27M</td>
</tr>
</tbody>
</table>

**Shift in focus towards profitability and sustainability has led to restructuring of the workforce within organizations**

**Layoffs by edtech start-ups in 2022**

- **BYJU'S The Learning App**
  - 2,500 layoffs
- **unacademy**
  - 1,500 layoffs
- **WhiteHat Jr**
  - 1,100 layoffs
- **Vedantu**
  - 1,000 layoffs
- **toppr**
  - 350 layoffs
- **LIDO**
  - 200 layoffs

Acquired by Vedantu in Feb’22 after the layoffs

**Edtech start-ups closed in 2022**

Source(s): Industry reports, Press reports, Secondary research, 1Lattice analysis
Investor focus shifted to new / smaller start-ups with a special focus on overseas education consulting start-ups

Investors have shifted focus from large players to new start-ups like PhysicsWallah, Scaler, etc.

YoY funding raised by edtech start-ups (US$ B, 2020-2022)

<table>
<thead>
<tr>
<th>10 companies by investments received in 2022</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>BYJU’S The Learning App</td>
<td>US$ 1,050M</td>
<td>US$ 2,914M</td>
<td>US$ 1,346M</td>
</tr>
<tr>
<td>ERUDITUS EXECUTIVE EDUCATION</td>
<td>US$ 350M</td>
<td>US$ 650M</td>
<td>US$ 113M</td>
</tr>
<tr>
<td>upGrad</td>
<td>US$ 435M</td>
<td>US$ 477M</td>
<td>US$ 6.68M</td>
</tr>
<tr>
<td>LEAD</td>
<td>US$ 124M</td>
<td>US$ 30M</td>
<td>US$ 28M</td>
</tr>
<tr>
<td>PHYSICS WALLAH</td>
<td>US$ 100M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Leap Scholar</td>
<td>US$ 75M</td>
<td>US$ 72M</td>
<td>US$ 5.5M</td>
</tr>
<tr>
<td>Classplus</td>
<td>US$ 73.7M</td>
<td>US$ 65.7M</td>
<td>US$ 19.3M</td>
</tr>
<tr>
<td>cuemath</td>
<td>US$ 57M</td>
<td>-</td>
<td>US$ 43.1M</td>
</tr>
<tr>
<td>SCALER by InterviewBit</td>
<td>US$ 55M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Newton School</td>
<td>US$ 25M</td>
<td>US$ 5M</td>
<td>US$ 0.6M</td>
</tr>
</tbody>
</table>

Previous funding round: 2019

First funding round: US$ 1,050M

Increased w.r.t previous year

Decreased w.r.t previous year

Remained same

Overseas education consulting start-ups received US$ 153 M in 2022

Amount invested in Overseas Ed consulting start-ups in last 12 months (US$ M)

Recently funded start-ups

<table>
<thead>
<tr>
<th>Leapscholar</th>
<th>Series D – June’22 – US$ 75M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Series C – September’21 – 55M</td>
</tr>
<tr>
<td></td>
<td>Total funding received – US$ 153M</td>
</tr>
</tbody>
</table>

Leverage Edu

<table>
<thead>
<tr>
<th>Series B – Jan’22 – US$ 22M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total funding received – US$ 32.2M</td>
</tr>
</tbody>
</table>

Foreign Admits

| Seed – May’22 – US$ 422K |
| Seed – October’21 – US$ 466K |
| Total funding – US$ 1M |

Source(s): Tracxn, Secondary research, 1Lattice analysis

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Top education focused NBFC start-ups disbursed higher loan amount in FY22 compared to previous year

Key start-ups in education finance space

<table>
<thead>
<tr>
<th>Founded</th>
<th>Headquarters</th>
<th>Business model</th>
<th>#Institute partners</th>
<th>Revenue (US$M, FY22)</th>
<th>Total funding (US$M)</th>
<th>Last valuation (US$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVANSE</td>
<td>2013</td>
<td>Offers higher education loans, also provides 100% finance for abroad studies</td>
<td>3K+</td>
<td>US$ 62.01M</td>
<td>US$ 175M</td>
<td>US$ 550M</td>
</tr>
<tr>
<td>AUXILO</td>
<td>2016</td>
<td>Provides education loans to students as well as institutes</td>
<td>700+</td>
<td>US$ 11.29M</td>
<td>US$ 50.8M</td>
<td>US$ 71.6M</td>
</tr>
<tr>
<td>eduAnz</td>
<td>2016</td>
<td>Provides education loans across levels, from K12 to PG</td>
<td>600+</td>
<td>US$ 3.58M</td>
<td>US$ 37.4M</td>
<td>US$ 100M</td>
</tr>
<tr>
<td>Propelld</td>
<td>2017</td>
<td>Provides education loans, serves as a fee collection platform for institutes</td>
<td>550+</td>
<td>US$ 0.64M</td>
<td>US$ 39.1M</td>
<td>US$ 96.9M</td>
</tr>
<tr>
<td>CREDENC</td>
<td>2017</td>
<td>Provides higher-ed loans also acts as an education loans marketplace</td>
<td>1K+</td>
<td>US$ 0.1M</td>
<td>US$ 28.5M</td>
<td>US$ 6.75M</td>
</tr>
</tbody>
</table>

New age education loan providers like Avanse registered ~3x increase in loan disbursements

Amount of loans* disbursed by education focused finance start-ups (US$M, FY21-FY22)

<table>
<thead>
<tr>
<th>FY22</th>
<th>FY21</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>342.7</td>
<td>124.4</td>
<td>27.4</td>
</tr>
</tbody>
</table>

Loan disbursement picked up post the dip in 2021 (COVID impact)

Note(s): *Loan amount includes both loans disbursed to students and educational institutes, US$ 1 = INR 82/Source(s): Company websites, Annual reports, Secondary research, 1Lattice analysis

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Multiple start-ups are providing option of “pay after placement”, thereby providing more opportunities for students to pursue higher education.

Source(s): Company websites, Annual reports, Secondary research, 1Lattice analysis

“Pay after placement” model

- Student takes admission by paying a nominal registration or no upfront fee
- Student pays a zero-cost EMI after they start earning
- Guaranteed placement in corporate partners
- Completes the course

Start-ups using “pay after placement” model

- Sunstone
- Placewit
- Coding Ninjas
- Newton School
- Geekster
- Xcelero
- GamutGurus
- FunctionUp
- AccioJob
- Sharpener

Growth drivers for education loans and “pay after placement” model

- India has ~40M students pursuing higher education in 2021
- Rising awareness & aspirations to pursue quality higher education
- Average price of an MBA degree increased from US$ 13-16K in 2017 to ~US$ 26K in 2022 (similar surge in K-12)
- Increased need for up-skilling courses due to increased competition in the job market
- Higher options to upgrade online by pursuing multiple courses
- Quick loan disbursal with digital & paperless process
- Evaluation based on future income potential instead of present credit worthiness / score

Sharpener

Student pays a zero-cost EMI after they start earning

Guaranteed placement in corporate partners

Completes the course

Aspirations to pursue higher ed

Rising cost of education

Need for upskilling

Easy access to loan

Rise of Edu-finance
Emergence of hybrid business models to leverage the advantages of both offline and online learning

<table>
<thead>
<tr>
<th>1. Online VAS by offline players</th>
<th>2. Offline touch-points by online players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional offline education</td>
<td>Online value-added services</td>
</tr>
<tr>
<td>Offline Institutions</td>
<td>Services like course planning, doubt-solving, and student profiling</td>
</tr>
<tr>
<td></td>
<td>Online Education</td>
</tr>
<tr>
<td></td>
<td>Offline value-added services</td>
</tr>
<tr>
<td></td>
<td>Services like in-person counselling, helping in test preparation, and matching the right faculty</td>
</tr>
</tbody>
</table>

- Offline institutions provide online VAS in response to emerging round-the-clock learning needs
- Online VAS at schools and universities are provided independently or through edtech partnerships

- Omnichannel edtech with offline touchpoints aims to integrate offline classroom experiences into the learner’s journey
- BYJU’s acquired Aakash Educational services for $1B in 2021 and is now independently expanding test prep centers

Key players:

Source(s): Secondary research, News Articles, 1Lattice analysis
Emergence of hybrid business models to leverage the advantages of both offline and online learning (2/2)

3. Blended Learning

- Customized offline pedagogy using analytics-based feedback coupled with online content (notes, tests etc.)
- Tech-powered schools and universities leveraging edtech solutions like virtual classrooms, smart boards, and e-library etc.

Key players:
- BML Munjal University
- Amity University

4. Market expansion by offline players

- Market expansion by offline players - to bridge learning gaps and provide one stop hybrid learning solutions for learners
- Allen Careers launched Allen Digital providing online learning for NEET UG and JEE Mains and Advance aspirants

Key players:
- FIITJEE
- TIME
- Allen Career Institute

Source(s): Secondary research, News Articles, 1Lattice analysis
### Rise of omni-channel approach

**Shift towards omnichannel model as a higher number of K12 and test prep edtech players expand via offline centers**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rationale</th>
<th>Players (illustrative)</th>
</tr>
</thead>
</table>
| Offline centers for test prep | • With an aim to start one center every 2 weeks, Unacademy has already started centers in 8 cities, primarily in northern India  
• BYJU’s is live in 23 cities across 80 centers and with a planned investment of $200 million in offline tuition centers, BYJU’s aims to scale up to 500 centers across 200 cities by 2022 and onboard 1M students  
• Vedantu offers hi-tech interactive offline classrooms with immersive 3D content and live doubt solving  
• Infinity Learn, the online arm of Sri Chaitanya Group aims to open 100 tuitions centers PAN India | ![Unacademy](https://example.com/unacademy)  
![BYJU'S](https://example.com/byjus)  
![Vedantu](https://example.com/vedantu)  
![Infinity Learn](https://example.com/infinitylearn) |
| Hybrid learning of new age skills | • Thinker Learning (STEMRobo) collaborated with 1.5k schools to provide online coding classes  
• PeakMind (2020) imparts behavioral coaching and mindfulness through an offline center in Bengaluru and to online user base PAN India | ![Thinker Learning](https://example.com/thinkerlearning)  
![PeakMind](https://example.com/peakmind) |

---

Students and parents have understood the comfort that online mode offers, hence a hybrid model is how edification will be accessed going forward

- Alakh Pandey, Founder PhysicsWallah

Most students can’t learn effectively online. During the pandemic it was a forced choice, but now, most want the lecture component to be offline

- Vivek Varshney, Founder SpeEdLabs

There are numerous advantages of a hybrid model. You can cater to a larger audience and often give learners an option to pick what suits them best

- Nikhil Barshikar, Founder Imarticus Learning

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Source(s): Secondary research, News Articles, Company website, 1Lattice analysis
Offline institutes exploring online avenues to increase student / parental engagement and increase convenience of learning

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rationale</th>
<th>Players (illustrative list)</th>
</tr>
</thead>
</table>
| Early learning                  | • Big early learning offline players continue to keep an online arm post pandemic for small videos, stories, activities, performance reports, etc.  
                              | • Klay onboarded 2k students since the launch of its hybrid programs, especially from T2/3 cities; Euro Kids and Klay enhancing parental engagement via hybrid models | Eurolit Kids, Lighthouse Learning |
| Higher ed                       | • Upgrad offering full-fledged online blended degree programs in partnership with Jamia Hamdard University and OP Jindal Global  
                              | • Imarticus Learning is expanding offline centers in Tier 1/2 cities                                                                        | IMARTICUS Learning, upGrad, SWAYAM portal |
| Blended learning with offline college | • UGC mandated up to 40% of universities courses to be availed online via the SWAYAM portal with a facility of credit transfer  
                              | • With 7,115 courses, SWAYAM currently caters to ~27M learners and disbursed 1M certificates                                                        | AMITY, BML Munjal University, SWAYAM portal |
| Regulation for hybrid           | • ~338 universities across 29 states expressed interest in adopting a hybrid model & credit transfer of SWAYAM courses  
                              | • Institutions like Amity, IIT Madras, and BML Munjal University have adopted it vs pushbacks from Delhi University and a few others               | AMITY, BML Munjal University, SWAYAM portal |

We have invested in hybrid learning for a long time now. We offered virtual schooling in 10 days of school closure during lockdown. We have also adopted LMS.

- Prajodh Ranjhan, Founder Lighthouse Learning

SWAYAM platform is an opportunity for students to enroll in multiple courses and avail multiple certificates and earn academic credits.

- Rajnish Jain, Secretary UGC

Our curriculum bridges the gap between theory and practice by integrating learning and living and synchronizing classroom with workplace.

- Sunil Munjal, Founder BML Munjal University

Source(s): Secondary research, News Articles, Company website, 1Lattice analysis
Demand for edtech solutions fulfilled by various players providing online infrastructure for smooth transition

Highly demanded edtech solutions by learners

1. Virtual Lab
2. E – Library & Resources
3. Student self learning facility
4. Online synchronous class facilities
5. Classroom assessments
6. 3 - D classrooms
7. Automatic attendance registering & monitoring
8. Online project submission & evaluation

Online infrastructure for traditional offline players

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rationale</th>
<th>Players (illustrative)</th>
</tr>
</thead>
</table>
| Aid for tutors to setup online    | • Players like Classplus, Teachmint and Cuemath taking traditional offline tutelage online  
• Set up of online teacher student ecosystem – attendance, performance, classes etc. | Classplus, Teachmint   |
| Edtech IT solutions               | • Online institutional infrastructure – admissions and fees management system etc.  
• Skillveri delivering vocational training using XR simulator tech through training centers & institutes  
• Players like Blackboard hosting training modules for teachers to acquaint them with online ecosystem | Skillveri              |

Source(s): Secondary research, News Articles, Company website, 1Lattice analysis
NEP will create opportunities for out of school platforms as it becomes fully operational by 2040

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Impact of New Education Policy 2020 (NEP) on edtech models</th>
</tr>
</thead>
</table>
| Coding & STEM courses   | • Increase in emphasis on coding, analytics and STEM courses will increase focus towards coding and subject learning platforms → significant growth opportunity  
• Currently ~103M learners are from G6-10 alone, who would need coding, analytics and STEM products after NEP |
| Educational games & kits| • Focus on game-based and creative learning during foundational and preparatory stage → rise in demand of platforms focusing on educational games and kits |
| Language learning       | • Emphasis on 3 language model → creates opportunity for language learning model to tap learners in foundational and preparatory stage  
• Currently, there are 129M+ learners in G5 and below who would need language learning support |
| Recorded content        | • Recorded content needs to be updated according to new curriculum → require capital investment  
• There is 15,000+ hours of recorded content on Byju’s platforms alone, which may have to be modified |
| Doubt solving           | • Platforms focused on doubt solving through AI and human involvement must update their AI models and train the instructors Doubtnut solves ~18M+ doubts per month with 90% accuracy and has 5M+ video solutions, which will need to be modified |
| Assessments             | • Assessments and mock tests will be more focused towards aptitude tests and Olympiads → current assessment engine and question banks will require revamping  
• Vedantu conducts more than 1,200+ mock tests / assessments on their platform for G6-12 that will need to be edited according to NEP → affects product market fit |
| Live lectures           | • Instructors and teaching assistants will require training → will negatively impact unit economics  
• 20,000+ educators on various edtech (including instructors and assistants), who need to be trained to get acquainted with NEP |

Source(s): Secondary research, News Articles, Company website, 1Lattice analysis

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## Government policies focus on making youth career ready in an affordable manner

<table>
<thead>
<tr>
<th>Policies</th>
<th>Started</th>
<th>Impact</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWAYAM - Study Webs of Active Learning for Young Aspiring Minds</td>
<td>FY17</td>
<td>High reach - 2.7cr students registered through SWAYAM portal</td>
<td>• Indian MOOC platform offering 2K+ free courses for classes from 9 to post-graduation&lt;br&gt;• Faculty of IITs, IIMs, IISRs to teach students for free&lt;br&gt;• Developed by MHRD, AICTE with the help of Microsoft</td>
</tr>
<tr>
<td>PM eVIDYA</td>
<td>FY20</td>
<td>Recognized by UNESCO for the use of ICT</td>
<td>• Radio podcasts for visually and hearing impaired K-12 students&lt;br&gt;• 750 virtual labs and 75 skill labs in science and maths, teachers available via online mode&lt;br&gt;• 1 class 1 TV program with ~200 TV channels for students having no access to the internet</td>
</tr>
<tr>
<td>PMGDISHA - Pradhan Mantri Gramin Digital Saksharta Abhiyan</td>
<td>FY17</td>
<td>Tremendous response over cashless transactions, increase use of BHIM</td>
<td>• Aims to make 60 M people in rural areas digitally literate&lt;br&gt;• Scheme aims to bridge digital divide specially targeting marginalised areas</td>
</tr>
<tr>
<td>NEP 2020 - National Education Policy</td>
<td>FY20</td>
<td>Broad guideline, up to the states, institutions to decide its implementation</td>
<td>• Mandatory local-language as medium of instruction (grade 3-5) &amp; emphasis on coding, computational skills (grade 6-8)&lt;br&gt;• Single-day board exams &amp; best of 2 attempts to test core capacities (grade 9-12)</td>
</tr>
<tr>
<td>NDEAR - The National Digital Education Architecture</td>
<td>FY21</td>
<td>20k+ ecosystem participants, 600 M books, 10 Vidya kendras</td>
<td>• Not a platform, but a blueprint to create reference solutions, innovation space e.g., Sandbox&lt;br&gt;• Leverage existing platforms and emerging tech innovations like AI / ML, AR / VR</td>
</tr>
<tr>
<td>CJVL - CISR Jigyasa Virtual lab</td>
<td>FY17</td>
<td>India’s first virtual lab launched in 2021, much more progress is to be made</td>
<td>• Creating innovative tools and content through Jigyasa and Virtual Laboratory&lt;br&gt;• Advanced digital technology, software outsourced from IIT B</td>
</tr>
</tbody>
</table>

### Collaborations / Tie-ups
- STEMRobo Technologies and Deeksha STEM are working with government schemes to push forward STEM education in India
- Aavishkaar, Robotix Learning Solutions, Robokart, and Whizrobo are setting up ATLs and robotic labs in schools and develop robotic kits and DIY kits

Source(s): Secondary research, Press releases, Industry reports, 1Lattice analysis

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PM eVIDYA provides multi-mode access for imparting education by using technology

PM eVIDYA aims to facilitate access to digital / online learning

SWAYAM Portal
Consists of video lectures, reading materials, quizzes and an online discussion forum

Special content for Children With special Needs
Consists of video lectures, reading materials, quizzes and an online discussion forum

Radio & Podcast content
Radio will be used specially for children living in remote areas with no access to internet (specially classes 1-5)

SWAYAM Prabha
Group of DTH channels telecasting 24/7 educational programmes for students without access to the internet

DIKSHA
QR embedded e-book for all classes & a dedicated a TV channel for 12th grade students

Online coaching for competitive exams
IITPal is a series of lectures prepared by IIT Professors to help students prepare for JEE & NEET

Use of ICT in eVIDYA earned UNESCO’s recognition

Impact of PM eVIDYA

- Increase in FY22-23 budget allocation for PM eVidya ~INR 1 lakh+
- The Central Institute of Educational Technology (CIET) uses - 12 DTH TV channels, 397 radio stations
- UNESCO’s recognized prize awarded to MOE for the use of ICT
- DIKSHA earned more than 3 crore hits per day in FY20
- 21 lakh+ students registered for SWAYAM sessions in FY22
- Expansion from 12 to 200 TV channels in FY22-23

Source(s): Secondary research, Press releases, Industry reports, 1Lattice analysis
Edtech players are experimenting with new technologies like AI, AR, etc. to enhance the experience of learners and teachers

<table>
<thead>
<tr>
<th>Tech Trends</th>
<th>Offering</th>
<th>Players</th>
</tr>
</thead>
</table>
| Artificial Intelligence            | • Teachers: Automates “operational” activities that ensure more time for high-order activities like teaching and guiding students  
• Learners: “intelligent tutoring systems” AI can adapt to each student’s knowledge level, goals | [Image] BYJU'S, Prodigy, The Learning App, NOOKID, Mindler, Embibe, edWeb, emotix, Sunstone, My Class Campus, LEAD, Olive, moodle, STRIVR, upGrad, wonderSpace, CampK12, mandly, shifu, BYJU'S, the learning app |
Gamification is interactive, promotes fun, offers real-time feedback to the learners & is deeply penetrated across major plays

**Gamification while learning is interactive, more engaging and accessible**

**Benefits of Gamification**
- Creating a fun and interactive learning experience; E.g., Brainly discovered that gamification resulted in 13% more completed answers & 82% of students felt inspired to continue learning
- Using real-world applications to engage; E.g., Duolingo has an appealing and playful design
- DIY kits / STEM toys with digital content where users get access to the free content library on a mobile app.
- Offering real-time feedback

<table>
<thead>
<tr>
<th>Segment</th>
<th>Use cases</th>
</tr>
</thead>
</table>
| Primary & secondary supplementary education | • Simulation: Application of concepts  
• Quizzes and peer comparison  
• Interactive lab experiments |
| Test preparation                      | • Interactive learning; leader board, badges  
• Discounts and prizes based on overall performance |
| Higher Education                      | • Endorsements  
• Minimum pass percentage in a module to unlock the next module  
• Badges, leadership board |
| Reskilling & online education         | • Micro-credentials, discount for subsequent courses on completion of current course  
• Level advancement, badges |
| Language & casual learning            | • Increase in difficulty per level  
• Unlocking new features after completing every level  
• Forming elite group based on performance |

**Engagement-learning matrix of different education methods**

**Top players in Gamification**

Source(s): Secondary research, 1Lattice analysis
Tech adoption has enabled changes in the learning methods of students

**Engagement**
- Group Work: Virtual collaboration & knowledge sharing
- Connectivity & community building: Tools to engage with one another, instructors, course materials

**Tech**
- AR/VR: Interactive simulations
- ML-powered teaching assistants: Apps or chat bots for Q&A and create tests
- AI adaptive course delivery: Custom lessons based on student progress

**Outcomes**
- Student progress monitoring: Progress monitoring, at-risk alerts
- Classroom interactions: Polls, chat for questions and commentary, breakout rooms
- Classroom exercises: Learning games, badges, rewards

**Emergence of new learning methods**

**Micro and Nano Learning:**
- Delivers bite-sized learning modules within 15 minutes
- Promotes learning with learning objectives
- Used by HR or corporate training teams

**Adaptive learning:**
- Teaching methods and materials change to match each student’s pace
- Customizes presentation, by constantly analyzing the answers selected by the adaptive software

**Analytical learning:**
- Used by teachers to better record the learning behaviors of students
- This data helps teachers provide targeted improvements to courses

Source(s): Secondary research, Press releases, Industry reports, 1Lattice analysis
Across plays, a significant level of tech adoption is seen for classroom learning, self-tutoring, test prep etc.

### Adoption of tech

<table>
<thead>
<tr>
<th>Prior to commencing study</th>
<th>During study</th>
<th>After study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospective</td>
<td>Classroom learning</td>
<td>Campus life</td>
</tr>
<tr>
<td>Recruitment (Test, etc.)</td>
<td>Self study/tutoring</td>
<td>Upskilling</td>
</tr>
<tr>
<td>Admission</td>
<td>Tests/exams</td>
<td>Casual Learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduation employment</td>
</tr>
</tbody>
</table>

#### Early Learning
- Children selecting via videos, etc.
- Players like Ekam provide online schooling for kids
- School search aggregator - bridging the gap between school & students
- Offline or very rare online application process
- Mix of offline and online mode of selection procedures
- Colleges have online application process
- Often online admission process with no or rare offline procedures

#### K-12
- Offline selection procedure with physical exams, tests, etc.
- Offline or very rare online application process
- Education kits, gamified toys
- AI-powered companion robot for children; Miko
- Games, quizzes with gamified version
- No access to student apps, digital channels, etc.

#### Higher Ed
- AI based course suggestions to users
- Ex: Udemy, upGrad
- Educational kits, gamified toys
- AI-powered companion robot for children; Miko
- Platforms like Embibe implement AI in test prep
- upGrad uses AI to decide the question bank for students
- Preparing students for workplace and jobs by providing skill training through VR courses and VR labs

#### Professional learning
- AI powered companion robot for children; Miko
- Games, quizzes with gamified version
- No access to student apps, digital channels, etc.
- Virtual campus hiring process for student recruitment
- UpGrad partners with AR pioneer EyeWay

Source(s): Secondary research, Press releases, Industry reports, 1Lattice analysis

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