**‘How is India’s edtech economy looking to shape in the coming years?’**

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**Abstract**

An ed-tech company's online platform connects tutors, students, and opportunities. The platform seeks to create a situation in which everyone benefits. The founder arrives first, making all the first investments and doing marketing to draw customers to the ed-tech platform of the business. Since COVID-19 began, the ed-tech sector in India has grown significantly. In 2016, the sector was still active, but not expanding as quickly as it should have. But everything has altered drastically. Online education is a huge source of revenue for ed-tech companies in India thanks to the internet and other modern advancements. The value chain, business model, and growth of Indian educational technology are highlighted in this chapter.

**Introduction**

An EBEF analysis estimates that the Indian EdTech market was worth US$ 750 million in 2020 and is projected to grow by US$ 4 billion by 2025 at a CAGR of 397.7 percent.

This rise has been influenced by several variables, but one of the main propelling forces has been the country's extensive access to reasonably priced internet and mobile devices. This availability is anticipated to last into the future, fuelling the edtech sector's continuous expansion.

**The Support of Government Policies**

The government's increased attention to the edtech sector has improved the business climate for edtech firms. This will promote the industry's expansion and development.

In addition to investing in edtech businesses and releasing regulations to support the use of online learning platforms and digital educational resources, it is actively promoting digital education. The National Education Policy (NEP) 2020 is the most significant of them all (Rohit Kumar Nag, 2022).

The focus on technology in education under the National Education Policy (NEP) 2020 is anticipated to increase demand for edtech goods and services. It offers chances for new businesses to enter the market and for established businesses to grow in order to create cutting-edge solutions that address the changing needs of the education industry. Additionally, the government

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It invests in edtech and actively promotes digital education. With its laws allowing 100% foreign direct investment (FDI) in the education sector under the automatic route of approval, the government also offers enormous opportunities for foreign investors. This policy facilitates international collaboration and the exchange of ideas by streamlining and simplifying the procedure, which can further boost the development and efficiency of education technology in the nation.

**Hybrid Learning Solutions**

The edtech market will need to adopt a mixed strategy as the pandemic draws to an end.

The term "hybrid approach" describes the application of both online and traditional classroom teaching strategies. This strategy combines the flexibility and convenience of online learning with the framework and assistance of conventional classroom instruction.

By combining the advantages of both approaches, edtech companies may enhance learning outcomes and experiences while fostering greater user loyalty.

**Online Community-Based Learning**

Online community-based learning has the potential to encourage a more collaborative and participatory learning experience for students given the broad availability of the internet, the rise of remote jobs, and distance learning programs.

Online community-based learning involves students learning from and interacting with one another on a virtual platform, frequently with a moderator.

Online communities that connect people to exchange resources and experiences can be found by learners on social networking sites, in forums, and in other online locations. This can help kids develop soft skills like teamwork, communication, and empathy as well as a sense of community and peer support.

Community-based learning might become a more common method of developing these abilities as their significance is more widely acknowledged.

With the growing use of technology in rural and small towns around the nation, the future of edtech in India is bright and hopeful. By developing rules that promote the use of technology in education, the government is also assisting the development of edtech in India. Future ed-tech experiences will continue to be incredibly important for integrating hybrid learning approaches and online communities. These methods present chances for students to acquire priceless knowledge and abilities that can help their development both personally and professionally.

In general, as the education industry develops, it is inevitable that we will witness the creation of cutting-edge technology, platforms, and learning techniques targeted at increasing education's efficiency and efficacy.

**Edtech Market**

The dynamic Edtech market and its many stakeholders, including vendors, technology platform providers, content developers, teachers, students, institutions as consumers, investors, regulators, and governments, have made the sector more complex. With major firms like Byju's and small start-ups trying their luck in India, the Edtech sector is diversified. The need is continually fueled by the accessibility of low-cost internet connections with adequate bandwidth through digital platforms. These Edtech businesses made claims about providing high-quality education delivery with simple access for a portion of the price of typical classroom delivery settings. While wreaking havoc on people's lives, the COVID-19 epidemic also laid the foundation for the digital learning model in the field of education.

The importance of these Edtech enterprises is expanding daily, especially in the wake of the COVID-19 pandemic, in the ever-expanding digital realm in the education sector. To increase outreach and boost the gross enrollment ratio (GER) in schools, colleges, and universities, the governments and their regulators have been waiting for a long time to bring large-scale technical breakthroughs through education technology. In order to evaluate the investments made in the education sector, they wish to modify the teaching-learning process in the sector. The stakeholders faced a number of difficulties as a result of the unanticipated boost to edtech following COVID-19.

The admissions process, having access to tangible books, having face-to-face interactions with teachers and their peer groups are just a few of the ways that learners, educators, administrators, governments, and companies engage. But the Edtech firms rapidly intervened at the beginning of remote learning. They offered online solutions by working cooperatively with the schools to provide digital content, proctored exams, and online admissions tests.

**Funding of Edtech Start-ups eco system:**

India has been steadily moving up the innovation and startup ecosystem food chain. The modern Indian Edtech start-up ecosystem makes use of cutting-edge technology to attract the interest of investors, large corporations, governments, and the sector. Prototypes are used by several of them to gain funding. They were successful in luring big investments, which spurs the industry's continued expansion, particularly during and after the Covid 19 pandemic. The edtech industry provides angel and corporate investors with chances to make significant financial gains while advancing the nation's educational goals. The demand for Edtech services generated numerous investment opportunities in listed stock and venture capital (VC).

The Covid-19 conundrum persists and occasionally resurfaces in a new form. It will expedite the investment in this scenario.Up to 8768 EdTech startups are already operating in India, according to data recently gathered by Tracxn Technology Limited, a Bangalore-based company that assists investors in discovering start-ups (Tracxn, 2021). Four of them have now achieved unicorn status: UpGrad ($1.2 billion), Byju's ($16.5 billion), Unacademy ($3.4 billion), and Eruditus ($3.2 billion) (Business Insider India, 2021). According to Indian Company Laws, Edtech businesses can enter the country through one or more combinations of (a) joint ventures, (b) partnerships, (c) franchising, and (d) subsidiaries. Out of the top 10 firms that got investment ranging from, according to the industry disclosure

Beginning in 2022, HolonIQ will release a study analyzing global education venture capital funding for 2021, which will show that Chinese EdTech investment is declining while investment in the US and Europe is surging dramatically. The Indian Edtech start-ups, which began with $1 billion in 2014, reached $3.8 billion in 2021 and ranked second to the United States ($8.3 billion). China ($2.7 billion) and Europe ($3.0 billion) are the next two most popular locations.

The investment from China began at $0.6 billion in 2014, grew to $10.2 billion in 2020, and then abruptly decreased to $2.7 billion in 2021. In the US, the amount increases dramatically from $2.5 billion in 2020 to $8.3 billion.

In 2020, Indian Edtech start-ups have raised US$ 4.7 billion in 165 deals and emerged as the third most preferred funded sector. The first two most-preferred funded sectors are e-commerce ($10.7 billion) and Fintech ($8 billion). India‟s top-notch Edtech start-up Bjyu‟s alone attracted $1.9 billion in funding in 2020. It is expected that Edtech will continue to flourish because of extended locked down due to the spread of new variants of the coronavirus across the globe. In 2021, India became the most preferred country for Edtech funding. At the beginning of 2022, Bjyu‟s has acquired 10 Edtech start-ups to have a first-mover advantage in the industry with a cost of over 4 billion. These ten

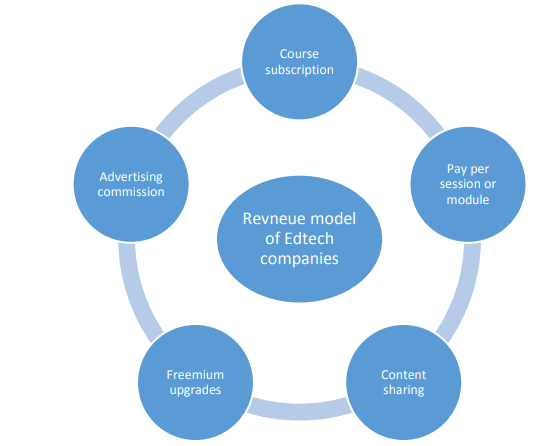
Edtech start-ups belong to different segment viz. exam-preparation-2; K-12-2; On-demand tutoring -

3; reading platform -1; and computer vision/Augmented Reality (AR)-1.

**Edtech Revenue Model:**

According to the KPMG report, in the current ecosystem, edtech companies charge students according to any one or a combination of the five kinds shown in Figure 1 above for access to their platform for online services. Edtech businesses use a distinct revenue-sharing model, with the tutor marketplace deducting a portion of payments throughout the platform payment process.

Figure 1: Schematic Revenue models in Edtech companies



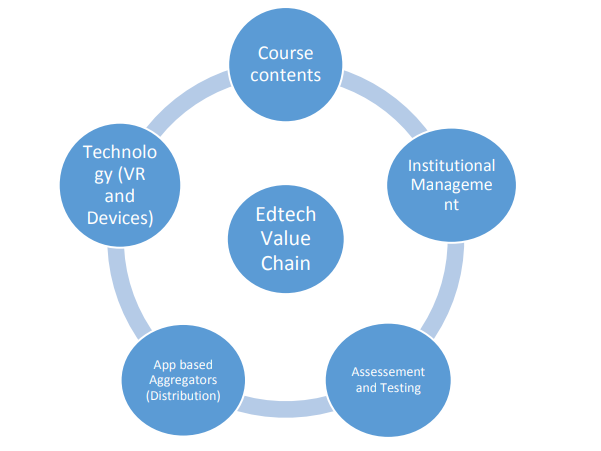
Source: KPMG India, May 2017

**EdTech Value Chain:**

The Edtech Value chain is consisting of five components viz. (a) Course contents; (b) Technology and

devices; (c) app based aggregators; (d) assessment and testing; and Institutional management

Figure 2: Edtech Value Chain



Source: PwC and CII Report, July 2021

According to a business involved in Edtech industry forecasting, the sector is projected to develop at a 15 percent CAGR between 2019 and 2025 and may reach US $ 400 billion. With the potential to affect billions of people, education technology (Edtech) is a growth-oriented industry in South Asia, notably in the Indian setting (Credit Suisse, 2020). In India, the market for K–12 education was worth US$ 1.16 billion, and the Edtech industry as a whole was worth US$ 2.8 billion. The market for educational technology is predicted to reach $ 10.4 billion by 2025. The K-12 and Test-Preparation category, followed by online certification, will continue to dominate in the future due to the lack of diversity in the Indian Edtech sector. The size of the

K-12's market is predicted to grow from its current value of $1.6 billion in 2020 to $4.3 billion by 2025. The market for test preparation, which is currently valued at $ 0.8 billion, is anticipated to reach $ 3,99 billion in 2025. Because of supply-side expansion and government programs and activities that support digital technologies and transformation in the education sector, demand for Edtech will keep rising. It would provide the K–12 and test preparation sectors a boost. The corporate sector consistently expresses a need for measures that contribute to skilling and reskilling.

**SWOC Analysis of Edtech Companies:**

Based on the literature review and trends in the Edtech start-ups ecosystem, the Strengths, Weaknesses, Opportunities, & Challenges (SWOC) analysis has been done. The same is presented in Figure 3 below. India is currently in the growth trajectory in the school and higher education sectors.

The K-12 market was worth $1.6 billion in 2020 and is projected to be worth $4.3 billion in 2025. Similar to this, the market for test preparation is currently valued at $ 0.8 billion and is projected to reach $ 3.99 billion in 2025. The government initiatives and programs fostering digital technologies and change in the education sector, along with supply-side growth, will drive the demand for Edtech to continue to rise. The K–12 and test preparation sectors would gain momentum as a result. Corporate sector demand for reskilling and skilling aspects remains consistent.

ntly confronting. The Indian Copyright Act and Patent Office have lengthy waiting periods for copyright acquisition. The certification process typically takes 3 to 4 months to complete. Institutions are not sufficiently prepared for the digital age. The majority of these institutions are supported by government entities like the University Grants Commission at the federal level and the Directorate of School or Higher Education at the state government level. The development of Edtech enterprises in India is further hampered by the lack of reliable IT and connectivity/bandwidth, particularly in rural, underdeveloped, and mountainous regions. India's Edtech market is extremely crowded, highly competitive, and operates in a small area.

Only a small number of the 4500 Edtech businesses now active in the market succeeded in scaling up and achieving a positive earnings before interest, taxes, depreciation, and amortization (EBITDA) margin. Higher education regulatory organizations do not encourage Edtech companies entering the market for online degree programs in partnership with HEIs.

Due to the fact that India is a multilingual nation, firms may face increased costs and competition from local players. Most businesses exclusively concentrate on the K–12 and test preparation markets, excluding the rivalry in higher education. Because the market offering is not differentiated, cost cannot be determined by cost. The necessity for the participants to prioritize differentiation in addition to scale-up is growing. The majority of Edtech businesses struggle to retain customers, which results in service failures. Lack of funding prevents the acquisition of expensive digital projects that would promote sustainability and online learning. The prospectus for funding from investors and government grants is reduced by heavy advertising.

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When they reach their target scale, they cut their marketing costs by 40 to 50 percent. Due to social pressure to score well on competitive exams in order to enroll in higher education, the Indian educational system is still exam-focused. It can take more time for schools and HEIs to adopt new digital cultures. With a few exceptions, specialist or generalist venture capital funds make up the majority of investors in the EdTech sector. Many of the larger venture capital-funded companies are now at the stage where these investors are beginning to search for an exit. An increase in IPOs (Initial Public Offerings)

Initial Public Offerings (IPOs) are being listed by venture capitalists (VCs) or rejected by their corporate owners in greater numbers.

Therefore, the EdTech industry need public funding.In India, the public sector has been the driving force behind digital transformation in all conceivable forms, and the government is investing heavily in a number of such projects. All governments and innovators have made significant investments in education recently. It has, in a sense, aided the growth of edtech businesses. During the Covid-19 era, app-based learning was first utilized by millions of users. Young adults and schoolchildren are becoming more interested in adaptive and personalized learning.

These technologies have been used in a number of urban schools, and young educators are stepping up to support the teaching and learning process.

According to data released by the Government of India's Invest India project, India will have the most notable and rapidly expanding digital economy with a sizable consumer base in 2020. India reached a milestone of 2018 billion app installations, or 14% of all app installations worldwide.

The University Grants Commission and the All India Council for Technical Education recently issued guidelines to all universities and technical institutes to guarantee that there is no outsourcing to Edtech corporations while providing online degree programs. Such partnerships between private institutions and Edtech firms would, in the eyes of UGC and AICTE, amount to franchising and go beyond the terms of approval for bestowing or providing such online degree programs. The regulating organizations in the higher education sector have the duty to prevent the commodification of education, even though the government is pushing digital education in every field.

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**Strengths**

(a) Cost efficient;

(b) Flexible learning;

(c) Effective learning;

(d) Personalized learning;

(e) Accessibility to an inaccessible markets;

(f) Scale and integrity;

(g) Industry-academia interaction;

(h) Skill development;

(i) Brings better coordination and governance; and

(j) Easy to collect feedback and analysis

**Weaknesses**

(a) Edtech cannot be a substitute to traditional

education;

(b) Commodification of education;

(c) Distraction by students and they always tempted to

use devices for procrastination;

(d) lack of critical inputs from teachers and less

transparency;

(e) Students are not intrinsically motivated and no proper

feedback mechanism;

(f) Possible dilution in quality of offering;

(g) Privacy and security of data issues;

(h) Cultural mindset-Indian education system is

continued to be an examination oriented; and

(i) Customer mindsets- Clients are looking for value

addition to the existing services;

**Opportunities**

(a) Digital Communication;

(b) Adaptive Learning;

(c) Personalized Learning;

(d) Content hungry Urban population: Improved internet

connectivity;

(e) Job opportunities to tech savvy people and gig or

freelance jobs;

(f) Government support for digital transformation in

education sector; and

(g) Corporate Training Programmes and Management

Development Programmes:

**Challenges**

a) IPR issues;

b) Digital readiness and Non availability of robust IT

and connectivity/bandwidth in non-urban areas;

c) Facing Stiff competition;

d) Less profit margin;

e) Regulatory bodies in the higher education sector are

not supportive for collaboration with universities;

f) Misalignment in approach- Global vs local;

g) Crowded Edtech landscape: focusing only on K-12

of Test-Preparation segments;

h) Lack of differentiation and retaining the customers;

i) High acquisition cost of customers- spending more

money on advertisement and marketing; and

j) Investment landscape: Investors are specialist or

generalist venture capitalist

CONCLUSION AND SUGGESTIONS:

Four factors contribute to India's Edtech eco-system's growth: (a) a young population; (b) parents with more discretionary income; (c) cheaper internet data; and (d) inexpensive portable devices for learning. The number of smartphone users is predicted to increase from 500 million in 2020 to 1 billion by 2025. Although the Edtech start-ups have undoubtedly affected the coaching and test-preparation industries, they haven't yet reached the fundamental value chain of education.

REFERENCES

1. Bhalla, Kritti, From Byju’s to Eruditus — India now has four edtech unicorns, thanks to a $4 billion fund flowing

in since 2020, Business Insider India (August 14, 2021).

https://www.businessinsider.in/business/startups/news/india-now-has-four-edtech-unicorns-byju-unacademyeruditis-upgrad/articleshow/85300757.cms

2. Cojocariu, V.-M., Lazar, I., Nedeff, V., & Lazar, G. (2014). SWOT analysis of e-learning educational services from the perspective of their beneficiaries. Procedia-Social and Behavioral Sciences, 116, 1999–2003.

3. Credit Sussie (2020), The growing demand for EdTech during coronavirus lockdown. https://www.creditsuisse.com/about-us-news/en/articles/news-and-expertise/education-technology-and-coronavirus-pandemic202004.html

4. D. Christopher Brooks and Mark McCormack.Driving Digital Transformation in Higher Education.ECAR

5 research report. Louisville, CO: ECAR, June 2020.file:///C:/Users/Admin/Downloads/Dx2020.pdf

6. Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49(1), 5-22.

7. Gadgets-360, NDTV, “Over 500 million Indians now use smartphones, 77 percent of who are online: techARC”

8 (January 30, 2020). https://gadgets.ndtv.com/mobiles/news/over-500-million-indians-now-use-smartphones-77-

percent-of-who-are-online-techarc-2172219

9. Gill Cashion and Stephen Wu (2021), Edtech and Educaiton: Disruption, innovation and opportunity, PwC.

10. https://www.pwc.com.au/digitalpulse/edtech-education-innovation.html

11. India Brand Equity Forum (2021) „India to become the edtech capital of the world.

12. https://www.ibef.org/blogs/india-to-become-the-edtech-capital-of-the-world

13. India Briefing. “Profiling India‟s EdTech Industry: A US$10 Billion Opportunity”. (January 7, 2022).

14.https://www.india-briefing.com/news/profiling-indian-edtech-industry-us-10-billion-dollar-opportunity24013.html/

15. Lockee, B. B. (2021). Online education in the post-COVID era. Nature Electronics, 4(1), 5-6.

16. Mackey, J., Gilmore, F., Dabner, N., Breeze, D., & Buckley, P. (2012). Blended learning for academic resilience in times of disaster or crisis.

17. Money Control. “India 2nd largest internet consumer with over 560 million users”. (January 20, 2020).

18 https://www.moneycontrol.com/news/technology/india-2nd-largest-internet-consumer-social-media-onlineshopping-preferred-activities-4831741.html

19. Price waterhouse Coopers (PwC) and Confederation of Indian Chamber of Commerce. “Reimaging the Learning with Technology, Building Sustainable EdTech Business in India” (July, 2021).

20 https://www.pwc.in/assets/pdfs/industries/education/reimagining-the-role-of-technology-in-education.pdf

21. Sands, T. & Shushok, F. (2020) The COVID-19 higher education shove. Educause Review,

https://er.educause.edu/blogs/2020/10/the-covid-19-higher-education-shove

22. Sikandar, M.A & Rahman, P.F. (2021), Edtech Start-ups in the education ecosystem in the post-Covid-19 era in India, Towards Excellence: Journal of Higher Education, UGC-HRDC, Gujarat University, India.

23. The Business Insider (May 11, 2020): https://www.businessinsider.in/business/startups/news/14-indian-edtechstartups-raised-funds-amid-the-covid-19-pandemic/articleshow/75667869.cms

24. The World Bank (2021), Digital Technologies in Education. https://www.worldbank.org/en/topic/edutech#1

25. Zee Business. “India to have 500 mn additional smartphone users by 2025, 5G subscriptions to top 2.6 bn globally:

26 Ericsson”. (November 25, 2019). https://www.zeebiz.com/technology/news-india-to-have-500-mn-additionalsmartphone-users-by-2025-5g-subscriptions-to-top-26-bn-globally-ericsson-11476